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Learning Outcomes in Two Divergent Middle School String Orchestra Classroom Environments: A Comparison of a Learner-Centered and a Teacher-Centered Approach

Bernadette Butler Scruggs

ACCEPTANCE

This dissertation, LEARNING OUTCOMES IN TWO DIVERGENT MIDDLE SCHOOL STRING ORCHESTRA CLASSROOM ENVIRONMENTS: A COMPARISON OF A LEARNER-CENTERED AND A TEACHER-CENTERED APPROACH, by BERNADETTE BUTLER SCRUGGS, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

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ABSTRACT

LEARNING OUTCOMES IN TWO DIVERGENT MIDDLE SCHOOL STRING ORCHESTRA CLASSROOM ENVIRONMENTS: A COMPARISON OF A LEARNER-CENTERED AND A TEACHER-CENTERED APPROACH

by

Bernadette Butler Scruggs

This study investigated whether and in what ways a learner-centered instrumental music education classroom environment may nurture musical growth and independence. The mixed-methods design incorporated quantitative and qualitative measures to compare performance outcomes, musical growth, and learner and teacher dispositions in learner-centered and teacher-centered middle school orchestra classrooms. Quantitative measures included a Performance Assessment Instrument and a researcher-designed survey of student perceptions and attitudes. Qualitative measures included classroom observation, student and teacher interviews, and teacher journal entries. Research participants were four teachers, two of whom taught using a teacher-centered approach, and two of whom were oriented to learner-centered classroom strategies through a professional development program taught by the researcher. The teachers implemented learner-centered or teacher-centered environments in four intact classrooms that included 155 student participants. Learner-centered methods were based on democratic (Dewey, 1938; Woodford, 2005) and constructivist (Vygotsky, 1978; Wiggins, 2001) principles as well as research and pedagogical literature detailing the characteristics of learner-centered classrooms (McCombs & Whisler, 1997; Schuh, 2004). These included peer

tutoring and collaboration; student conducting, solicitation and incorporation of student input; and facilitation of student leadership. I found no differences in music performance outcomes between learner-centered and teacher-centered ensembles. However, learner-centered students exhibited increased musical growth and greater musical independence as compared with students in the teacher-centered environment, and indicated higher perceptions than teacher-centered students of choice and leadership opportunities in their classrooms. Learner-centered teachers reported increased engagement and leadership skills from their students. Results of this study indicate that music ensemble teachers can incorporate a learner-center classroom environment that engages students musically, promotes independence and leadership, and involves students in higher order thinking while attaining performance standards at or above those expected of middle-school orchestra students.

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ABBREVIATIONS

GMEA	Georgia Music Educators Association
LGPE	Large Group Performance Evaluation
PAI	Performance Assessment Instrument
SOES	Student Orchestra Environment Survey

CHAPTER 1

OVERTURE

Introduction

Since their inception, instrumental classes in American schools have emphasized preparing public performances. This tradition has arisen through professional, administrative, community, and parental expectations (Russell, 2006). Instrumental classes have been organized as performing ensembles, and teachers have tended to imitate the transmission example by which they were taught, which is based on a rehearsal rather than a learning model (Jones, Palincsar, Ogle, & Carr, 1987). The persistence of this approach makes it challenging to steer ensemble classes toward more learner-centered music education (Shively, 2004). Democratic and constructivist learning theories have influenced learning environments for decades; nevertheless, instrumental music classrooms have remained largely static in their teacher-centered orientation.

Because of music teaching precedents rooted in this teacher-centered rehearsal paradigm, which is derived from professional and community ensembles, the ensemble teacher often sees himself or herself more as conductor than educator. Contemporary approaches that advocate a learner-centered environment may emphasize teacher modeling, the development of aural and reading skills through systematic methods, and even improvisation, but these are frequently proposed within an existing teacher-centered culture. Strategies designed to empower ensemble students to be self-directed and

independent learners, or to move beyond the norm of large group, conducted rehearsal and performance, even in jazz, are rare.

Extensive research and practice-based literature addresses democratic classrooms and constructivism in fields such as science, math, language arts, and social studies. Only limited material exists, however, regarding learner-centered ideals for music education, especially ensembles. Teacher-conductors may fear that incorporating democratic and constructivist approaches will compromise both the long established cultures that support their continuing authority and the musical proficiency of ensembles.

Research in music education suggests the tenacity of teacher-centered assumptions. A review of the last five years (2001-2006) of the *Journal of Research in Music Education* (*JRME*) revealed an abundance of articles regarding jazz education, performance evaluation issues, and traditional rehearsal techniques, all of which assumed the teacher-conductor paradigm. There was one article on university level cooperative learning (Smialek & Boburka, 2006), one article on democratic action in the high school instrumental classroom (Allsup, 2003), and one article regarding small-group peer interaction (Bergee & Cecconi-Roberts, 2002). There was one article concerning the high school music ensemble classroom environment (Kennedy, 2003), but it was not focused on learning processes. Notably missing was a body of research about the learner-centered classroom environment.

Shively (2004) believes that performance-based classrooms should be retooled to account for current learning theories. Anderson, Levis-Fitzgerald, and Rhoads (2003) assert the need for a learning environment where students perceive themselves as teachers, and educators remain as the learners. This atmosphere nurtures students who

are architects of their own education as well as critical thinkers. Shively describes this setting for the ensemble classroom:

> The nature of the experiences in the school should be on the rehearsal room as laboratory. In these settings, teachers must relinquish the dominant role of the traditional conductor, and serve to facilitate the learning though guiding and modeling musical thinking. (p. 189)

The lack of research on instructional models consistent with Shively's description argues for researchers to develop and study instrumental music classrooms that diverge from a teacher-centered culture to implement learner-centered democratic, constructivist-based approaches. Such classrooms should be compared to those with a teacher-centered culture in order to determine if there is a discernable difference in student learning outcomes and dispositions. The comparison of these two divergent classroom environments may offer suggestions of effective practice for students in ensemble classes.

An example of two divergent classroom environments comes directly from my own experiences as a string orchestra teacher. As a teacher with twenty-two years experience in ensemble teaching, I have incorporated a wide range of classroom practices. In my first years of teaching, I emphasized a teacher-centered culture because of the classroom model perpetuated during my years of teacher preparation. My students performed well, received superior ratings at performance evaluation events, and were invited to perform at the state music education convention. Parents, administrators, and supervisors rated my work as excellent.

Seven years ago, while working on an advanced degree, I was introduced to constructivist classroom approaches in a Wiggins (2001) textbook used for a curriculum class. A subsequent action research project to discover whether learner-centered small

ensemble opportunities would increase middle school students' musical understandings led me to realize these student-driven experiences had been important in developing outstanding players. Not only did these students perform better as a large ensemble than any of my previous classes, they were more independent learners. While I was available to them as a coach, the students began to rely on me less frequently for solutions. After concluding their time in a formal classroom setting, these students demonstrated the skills to continue performing independently if they chose to do so. The participating student musicians had successfully organized themselves into performance ensembles, chosen music, effectively rehearsed and performed. For me, the success of this project was the beginning of the evolution of learner-centered classroom practices that include democratic and constructivist principles.

Incorporating learner-centered practices has enriched the classroom experience for me as well as for my students. An excerpt from a student's essay written for a scholarship competition captures this experience from the learner's perspective.

> Mrs. Scruggs taught us everything she knew and we taught her some things she did not know. The guidance she gave me was helpful not only in my orchestra experience, but in my other classes as well. Mrs. Scruggs is one of my inspirations not because she held my hand through every piece, but because she let me go to find my own ending. Her passion to see her students exceed the set standards has motivated me to be passionate about reaching my goals in life.

Such comments have motivated and driven me to continue developing a democratic-constructivist learning approach in my classroom. The reward of finding that students not only appreciate my approach, but that their musical growth, satisfaction, and independence have improved compels me to continue my studies in this area.

The Need for this Study

Large ensemble classes tend to replicate a historic approach based on the professional/community ensemble rehearsal model. The teacher-conductor selects ensemble repertoire, chooses rehearsal objectives, detects performance errors, explains correction procedures to the group, and assesses the group's progress as they move toward their next public performance. Though this approach has been modified through time by instructors showing more sensitivity to diverse student abilities and by the demonstration of a more positive attitude toward students, the prevailing hierarchical, autocratic teacher-as-only-leader attitude often prevails.

Wilbert McKeachie, Professor in the Department of Psychology and a Research Scientist at the Center for Research on Learning and Teaching at the University of Michigan, Ann Arbor, first experimented with student-centered teaching and learning in 1946-48. McKeachie argued that educational practice should include a broader awareness of student cognition and motivation. Gaining understanding of these ideas has led toward student reflection, peer tutoring, collaborative practices, and active learning in contemporary classrooms (Landrum, 1999). Though music ensemble teachers and administrators may see short-term performance outcome advantages in a teacher-centered culture marked by efficiently conducted rehearsals, expert (teacher) directions, and dutiful student followers, these qualities do not necessarily lead to a classroom environment promoting independent musical growth that encourages the skills and confidence to pursue music beyond the classroom.

Continuing research on teaching and learning clearly argues the benefits of learner-centered initiatives, but research on ensembles often does not reflect this perspective.

Classroom ensemble directors choosing the teacher-centered culture that also pervades most music education research are supported by other music professionals, administrators, and the community because of accepted tradition. Without research comparing a teacher-centered culture to a learner-centered ensemble classroom environment, music educators may not be aware of the benefits of alternative learning environments. The need for research in this area is clear. To continue the status quo will not allow ensemble students the educational experience they deserve, those that might strengthen students' options for independent musical growth past formal education opportunities.

The Purpose of the Study

The purpose of this study was to compare the learning outcomes of a learner-centered environment with those of a more teacher-centered classroom culture and to analyze whether and in what ways a learner-centered instrumental music education environment may nurture musical growth and independence. Additionally, this study addressed how each approach (learner-centered and teacher-centered) was perceived by adolescents relative to their musical growth and interests.

Definitions

The following definitions were used in this study:

Teacher-centered classroom- The teacher-centered classroom offered instruction in a highly structured environment where the teacher organized the learning tasks, established the classroom objectives, and presented materials to support only these, and created the timetable and methods to achieve these learning tasks (Hancock, Bray, & Nason, 2002).

Learner-centered classroom- The learner-centered classroom offered instruction in a less structured environment that allowed students to influence the time and character of instruction, their approach to learning tasks, and to participate in an open exchange of ideas (Hancock, Bray, & Nason, 2002). For purposes of this study, the learner-centered environment included techniques consistent with democratic and constructivist learning principles.

Performance-based ensemble classes- For the purposes of this project, performance-based ensemble and instrumental classrooms were considered those that operate with the goal of a music ensemble performance as is consistent with a band or orchestra ensemble classroom.

Disposition- Katz (1993) defined disposition as the inclination to demonstrate repeatedly, knowingly, and willingly a model of behavior aimed at a broader goal. For purposes of this study, the term "disposition" covered a range of skills and focused on educational development.

Learning outcomes- Barr, McCabe and Sifferlen (2001) described learning outcomes as the knowledge, skills, and abilities students can demonstrate at the conclusion of a learning experience. In this study, student learning outcomes were demonstrated though ensemble concert performances and development of technical performance skills.

Musical growth- For purposes of this project, student musical growth was defined as an increase in the practice of student leadership skills, and in student diagnostic and problem-solving skills.

Overview of Research

This study compared the environments and learning outcomes of two divergent middle school string orchestra instructional settings: a teacher-centered classroom and a learner-centered classroom. Students in both types of classrooms shared the same performance dates with the same music; the learning process used to arrive at the performance outcomes, however, was markedly different. The teacher-centered paradigm had a teacher-conductor who determined the daily objectives, instructed the students on what, how, where, and when to play, and detected and corrected performance errors while keeping students quiet unless performing or asking questions. The learner-centered classroom environment offered students active learning, choice, leadership and problem-solving opportunities, as well as the chance to work toward their peak developmental level by integrating principles from democratic and constructivist learning theories. Additionally, the teacher in this class was considered a guide, a coach, and a learner.

Democratic classroom approaches, based on the work of Dewey, encourage an educated society using progressive educational practices that allow for alternative perspectives (Dewey, 1916/1997). Dewey's desire was ultimately to achieve a community-minded and democratic adult society, and his quest for instruction that offers students a chance for interaction, reflection, and practical experience is strongly supported by current educational theorists. Woodford (2005) incorporated Dewey's principles to offer suggestions for teachers of performance classes. He recommended that students should be extended the opportunity to create, elucidate, articulate, and validate their own opinions and musical understandings with others. This can be done by

word, gesture or musical sounds. "Music teachers are obligated not just to challenge the authority of tradition and the status quo, but also to envision, instigate, and guide positive change" (p. 89).

Social constructivism, which originated with Lev Vygotsky and has commonalities with the work of Jerome Bruner, is concerned with the way the learner develops meanings and understandings in a social context. Examining each learner as an individual with unique needs and backgrounds, social constructivism sees the learner as complex and multidimensional. Not only does social constructivism consider the learner's uniqueness and complexity, but it actually encourages, utilizes and rewards these characteristics as an integral part of learning process (Atherton, 2005). The constructivist classroom seeks to optimize student learning experiences by guiding students past their actual level of development toward their potential level of development, an area of immediate potential known as the zone of proximal development (Vygotsky, 1978).

Democratic classroom practices support student choice, reflective thought, group collaboration, and development of individual responsibilities. Constructivist principles within the learner-centered environment encourage student critique, student leadership, and independent learning to provide an optimal classroom experience. Both democratic and constructivist principles promote active learning, relevance of topic, and problem solving opportunities for students. Indeed, Bencze (2000) warned that constructivist epistemologies without democratic principles can lead to the disparagement of students' prior perceptions, regulated classroom experiences, and restricted conclusions. It is the careful combination of democratic and constructivist principles that will lead to a

classroom that offers students a true learner-centered experience (See Figure 1). The learner-centered model for this study drew from all of these principles.

Democratic Principles	**Constructivist Principles**	**Common Democratic/Constructivist Principles**
Student Choice	Student Critique	Relevance of Topic
Reflective Thought	Understanding	Active Learning
Student/Teacher Trust	Social Interaction	Problem Solving Opportunities
Individual Responsibilities	Independent Learning	Group Collaboration

Figure 1. Learner-centered classroom principles.

The Limitations of the Study

This exploratory study was designed to assess differences in learning outcomes, musical growth, student musical independence, and student and teacher learning dispositions relative to a comparison of learner-centered and teacher-centered principles and strategies. Because this study included intact student groups situated in existing classrooms, participants could not be randomized, nor was it possible to match groups or experience levels of teacher participants. The results of this study are not intended to be generalized.

The Questions of the Study

This study addressed the following central question: How do learning outcomes for students in a learner-centered string orchestra classroom environment compare with those of a teacher-centered string orchestra classroom environment?

Supporting questions included the following:

1. What evidence of musical growth occurs in a learner-centered classroom environment as compared to a teacher-centered classroom environment?

2. What evidence of students' self-perceptions as independent music learners occurs in a learner-centered environment as compared to a teacher-centered classroom environment?

3. What dispositions toward learning are evident among the students of the two divergent approaches?

4. What dispositions toward learning are evident among the teachers of the two divergent approaches?

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

Though some educators may choose to pioneer educational approaches that incorporate current research, others seem content to remain with what is considered common practice. This may occur because "conventional wisdom" assures us that commonly accepted, traditional teaching practices are highly regarded (Goodlad, 1984/2004). Certainly, the choice of a typical, teacher-centered classroom approach seems to be the preferred method in regard to performance-based classrooms. The instructors of large ensemble classes often incorporate a model based upon the exceptional ensembles of legendary conductors such as William Revelli (Shively, 2004). Music education students learn this example beginning with their secondary school education, and the trend continues during their university ensemble experiences.

The exploration of educational theories that might improve the ensemble learning process and promote lifelong learning could offer universities a reason to alter their teacher education instruction for ensemble teachers. If university level music education students found their own learning processes improved using a learner-centered model, as defined in this study, they could later share that example with their students, and the cycle could be broken. While other subject areas explore and incorporate democratic and constructivist principles that lead to learner-centered practice, these principles need further exploration from the perspective of ensemble music education.

The preponderance of research literature on ensemble instruction assumes the teacher/conductor model, in which instruction derives primarily from teacher directives, correction of student errors, and teacher-guided practice. Little research has been found that specifically addresses topics of learner-centered strategies such as the establishment of a learning partnership between teacher and students, active engagement in goal-setting and decision-making, self-initiated learning, student musical leadership, student reflective thought, student independent learning, and problem solving in the ensemble classroom. Similarly, no research has been found that specifically addresses the outcomes of a teacher-centered music ensemble environment in relation to any alternative approach. Because this study concerns the outcomes of an implemented learner-centered environment and uses the normative teacher-centered environment for purposes of comparison, the review of the literature focuses on theoretical underpinnings and research specifically relevant to learner-centered classrooms.

Democratic Classroom Principles

The democratic classroom encourages active participation by students in the classroom. John Dewey, the theorist most associated with the ideals of the democratic classroom, is perhaps the most inclusive and perceptive thinker to emerge in the Americas (Simpson, Jackson, & Aycock, 2005). Dewey was an educational philosopher who attempted to convert inflexible, traditionalist institutions into progressive schools that replicated the ideals of democracy (Hyman & Snook, 2000). Dewey (1916/1997) described democracy as more than a particular type of government, but instead as a "mode of associated living, of conjoint communicated experience" (p. 87). He further asserted that education varies with the quality of life prevalent in a particular group. A

society that considers and implements change as a means of improvement will have more divergent values and educational methods than a society that simply continues its own traditions. Dewey proposed that the democratic society, or one interested in continuous progress, is more likely than other types of communities to be interested in a deliberate and systematic education.

Mullins (1997) contended that schools offering a democratic environment make the commitment to students to offer social equity, both in the school community and the professional community. She asserted that teachers who practice democratic education promote active learning within their classrooms. Although teachers may realize the importance of active or independent learning by their charges, they may not follow through with a teaching style that promotes this. "On one hand, many teachers verbalize the importance of students increasingly becoming independent learners; on the other, most view themselves as needing to be in control of the decision-making process" (Goodlad, 1984/2004, p. 109).

Dewey (1938) suggested that the traditional scheme of schooling imposes adult standards, methods and subject matter upon students. These standards are beyond the reach of the experience our students possess. Because of this, these principles must be imposed, although good teachers will use a strategic approach to conceal the burden so that students are not aware of the evident "brutal" characteristics.

In Dewey's view, progressive education is more difficult for teachers to implement than the conventional classroom environment (Kohn, 1999). Kohn elaborated by explaining that teachers have to use open-ended questions and should also promote a classroom climate that allows students to create their own understandings. Additionally,

a more thorough comprehension of the subject matter is required because any schooling that is more demanding for the students requires more rigorous preparation by the teachers. As is reiterated by Mullins, "It is the personal and moral commitments of the educator that allow democratic pedagogy to take place" (1997, p. 3).

According to Mullins (1997), when traditional school practices are abandoned for democratic practices, the classroom comes alive. Trust is a necessary component of such an environment, so the teacher does not have to apply rigid rules to maintain student control. When this climate is implemented, students can spend their energies as learners instead of attempting to manipulate the rules. Trust is also extended to the students in allowing them to collaborate about learning practices. The teacher is willing to learn along with the students by allowing them to venture beyond the teacher's personal knowledge to inquire and expand their understanding. When teachers allow student control within the classroom, they are sending the message that they trust their students to take the responsibility for their learning as well for their behavior. Teachers, however, must clearly convey their expectations if they wish the results to be successful.

Kohn (1999) pointed out the common fallacy, perhaps disseminated by "old school" advocates, that higher standards in schools may be met primarily by the use of traditionalist methods. Progressive educators, he indicates, criticize traditionalists for under-challenging our students by having them memorize facts, listen to lectures, and rely on textbook answers. Sizer (1999) asserts that education should be personalized into enticing each child to his or her optimal abilities:

> It is the insistent coaxing out of each child on his or her best terms of profoundly important intellectual habits and tools for enriching a democratic society, habits and tools that provide each individual with the

> substance and skills to survive well in a rapidly changing culture and economy. (p. 11)

Kubow and Kinney (2000) identified eight characteristics consistent with a democratic classroom:

1. Students must be active participants in their learning.
2. Teachers must avoid textbook dominated instruction.
3. Teachers must foster reflective thinking practices by students.
4. Teachers must offer students the opportunities for decision-making and choices for problem solving.
5. The classroom must focus on controversial issues for discussion so students can focus on multiple perspectives.
6. Teachers must encourage the development of individual responsibility by members of the class.
7. Students must recognize the dignity of every person.
8. Teachers must incorporate principles and establish their relevance to students.

While there are classrooms that incorporate these important aspects of a democratic education, some teachers offer a guise of democracy by allowing students to vote on minor issues within the classroom. A truly democratic classroom is imbued with democratic principles and offers students the chance to take greater control of their education.

Arnstine (1995) said that to educate students democratically is to regard the aim of education in terms of student disposition. Dispositional change is achievable, observable and fairly constant. Additionally, most people are in agreement about what sort of dispositional traits should be acquired by students, even though they may disagree

about what knowledge should be disseminated. Arnstine concluded, "The sort of dispositions worth cultivating in schools will render people more cognizant of the world, more receptive to it, and more able to deal effectively with the challenges it keeps presenting" (p. 65). In the area of music education, Woodford (2005) charged teachers to school children in the ability to thoughtfully accept or reject musical experiences. He further maintained that students need to make music education choices by employing both critical judgment and self-restraint.

According to Schutz (2001), although Dewey's image of democratic education has continued to be of significance for more than a century, Dewey himself grew increasingly disillusioned with the thought that schools alone would generate a more democratic society.

> …Dewey's educational approach failed to equip students to act effectively in the world as it was (and still is), and...Dewey's model of democracy, while extremely useful, is nonetheless inadequate to serve the varied needs of a diverse and contentious society. (Schutz, p. 267)

Obviously, there are many principles of democratic education that offer valuable tools and guidance to classroom teachers. Adopting a wholly democratic viewpoint, however, may not be the only answer to present day classroom improvement.

Social Constructivist Principles

In the 1930s, Russian psychologist Lev Vygotsky described the theories that encompassed social constructivism. The theories of Vygotsky were not well known in the United States until the 1970s, when his works were translated into English. Rejecting previous learning theories introduced by Piaget, Thorndike, and Koffka, among others, Vygotsky theorized that children's learning begins long before they enter formal learning situations (Vygotsky, 1978). Additionally, Vygotsky believed that all human learning is

formed within a social context. Until Vygotsky, most learning theories had focused on the individual and had not considered the role of others in the learning process (Wiggins, 2001).

Constructivism is a descriptive theory of learning, meaning that it presents the manner in which people develop and learn; it is not a prescriptive theory of learning that explains the way people should learn (Richardson, 1997). The purpose of constructivist teaching is the practice of leading the learner to higher levels of both understanding and analytical capabilities. Cognitive constructivism, based on the work of Piaget, is a learning theory that focuses on how the individual learner understands things in terms of developmental stages and learning styles (Atherton, 2005). Social constructivism, introduced by Vygotsky, focuses on the process of individual understanding, with the assumption that each learner brings his or her own knowledge into the classroom. This knowledge may need to be supplemented, adjusted, or completely revised by teachers and adults who are agents of culture for students.

Vygotsky's theory requires an active, involved teacher who generates a context for learning in which students can become engaged in appealing activities that motivate learning. The teacher not only watches as students learn, but guides students as they handle problems. Social constructivist teachers urge students to work with peers while fully considering issues and questions at hand. Students are supported and advised while they confront absorbing, satisfying, real life challenges. Consequently, teachers, peers and other members of society aid students' cognitive development (Chen, 1998).

Wiggins (2001) contended that Vygotsky's theories mean that all knowledge of life experiences is constructed through our interactions with others. This knowledge is

therefore socially constructed, and social interaction is a primary component of any acquired learning. Learning occurs first on the interpsychological level, by acquiring knowledge from our interactions with others, and then on the intrapsychological level, when we are able to internalize what has been learned and operate independently using that knowledge. Constructivism suggests that learners create their own new understandings based upon what they already know and believe and then incorporate the new ideas with which they come into contact (Richardson, 1997). Teachers must explore their students' perceptions and integrate their preexisting knowledge for effective instruction (Donovan, Bransford & Pellegrino, 1999).

In summarizing the social constructivist viewpoint, it could be said that children become members of society as they learn from more knowledgeable members of the public. Socialization is not reliant on teachers or experts. Parents, families and friends all contribute to the socialization of the young (Arnstine, 1995). Children learn in an interactive social relationship and then internalize what they learn from that relationship until they are able to function independently. This area of immediate potential is known as the zone of proximal development (Wiggins, 2001). Vygotsky (1978) described this zone as "... the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

This zone of proximal development provides a tool to assist educators in understanding the internal course of the child's development. Bruner (1983) described the task of a teacher in this process as "scaffolding." The learner and the teacher work

together. The learner completes the tasks that he or she can perform in a competent manner. The teacher steps in to offer scaffolding, as necessary. Scaffolding is the process of observing the learner's current level and encouraging movement to the next plane. The teacher must determine when scaffolding is needed and when to gradually remove the supports, a technique known as "fading," so that the learner can function independently (Wiggins, 2001).

According to Olsen (2000), "The outcome of using constructivist principles and pedagogy should be increased learning on the part of all students, including improved student thinking" (p. 347). Brooks and Brooks (1999) suggested that educators need to urge students to inquire about their own questions and then search for the answers. Harris and Alexander (1998) pointed out that the ever expanding diversity in today's schools, combined with the higher standards expected from all students, are factors that make it essential to provide an "integrated, constructivist approach that does not fail our students" (p. 115).

Although teachers desire an education process that gives emphasis to the profundity of understanding and significance of learning, Harris and Alexander (1998) asserted that constructivist reforms had not led to a sound and inclusive modification of educational practice in our schools. This could be due to misconceptions about constructivist principles, teacher training programs that ignore constructivist theories, or, in the case of performance-based ensemble classrooms, an assumption of the teacher-conductor as the central authority figure.

Chicoine (2004) proposed a profound change in university teacher education courses. He warned that this may be impossible because no one questions the traditional

methodology of these courses. He contended that progressive school reform in the twenty-first century will be the loser if pre-service teachers are not better acquainted with constructing knowledge and with the skill associated with effective teaching practices.

Student Leadership

According to Chapman, Toolsie-Worsnup, and Dyck (2006), there was a previously held general belief by teachers that student leadership roles could only be appropriate for a few gifted and talented students. Many educators recognize, however, that all students possess leadership potential. A study of the Empowered School District project, a three-year venture conducted by nine school districts, two universities, and an educational foundation, concluded that schools should focus on students as their main asset and begin to create situations that allow students personal control, as well as assist in promoting self efficacy (Short & Greer, 1993). A study by Reed (2001) concluded that student leadership in the classroom is affected by type of training received, students' level of experience and their classroom environment. Leadership was evident in classrooms where training, experience, and environment joined together. Indeed, the school environment should encourage experimentation and allow students to take controlled risks. Project findings also suggested that teachers augment student leadership by encouraging the development of problem solving skills.

Obenchain and Abernathy (2003) encouraged teachers to provide students with choices and conduct classroom meetings allowing them to voice opinions on these choices. Additionally, students should be encouraged to self-assess constantly. Contemporary society demands that students emerge from schools as problem solvers who are able to control situations and collaborate effectively with others. Because of

these factors, teachers must offer leadership opportunities to their students (Chapman et al., 2006).

A student who exhibits leadership skills shows proficiency at more than just a single ability and also demonstrates the attitude and temperament that make leadership possible. The skill of leadership is not learned in a simple manner, but is rooted inside a more complex activity. To be leaders, students must either understand the significant value of leadership and the reasons that it will be useful for them in the long run, or must enjoy being principal members of the classroom (Arnstine, 1995).

Students' Role in the Conventional Ensemble Classroom

Student leadership deteriorates in the instrumental classroom in which the emphasis is on the instructor. Shively (2004) indicated that the focal point in almost every instrumental classroom is the teacher-conductor's podium, and he questions the teacher/student relationship in this traditional instrumental rehearsal approach. Freer (2006) asserted, "Students quickly become bored or frustrated with rehearsals that are conductor-centered and do not allow for student interaction and group processing of the rehearsal content" (p. 43). When a performance is nearing, time constraints may compel directors toward classes that function more as teacher-centered rehearsals, but when this instructional style is the norm, one has to wonder why. Though research supports making use of students' experiences in the classroom, there is little research support for the conductor-centered rehearsal model. Discovering and utilizing the individual talents of student musicians can change the rehearsal atmosphere from monotonous to an environment in which teacher and students work together to create an exciting and productive lesson.

Creating a Classroom of Leaders

Teachers surveyed in the study by Chapman et al. (2006) indicated that they can create applications of student leadership by using specific instructional methods. Adaptation of the physical learning environment, role modeling, modifying teacher instructional style, and using classroom-based leadership activities were all advantageous in helping to promote empowered students. Student empowerment promotes intellectual engagement when students are encouraged to assist in defining the lesson objectives. Teachers can facilitate this empowerment by using authentic assessment and developing "overarching" goals (Perrone, 1994). Freer (2006) maintained,

> Directors who allow students to take responsibility for their own learning do not abdicate authority within the rehearsal. Rather, these directors take responsibility for planning experiences so that students are able to connect with their prior learning and build toward the next challenge. (p. 53)

Additionally, instructors can promote freedom of thought through mature dialogue with their pupils. When a climate of reciprocal esteem and support is established, a focus on achievement can be implemented that furthers ownership by both teacher and students (Duhon-Haynes, 1996). Students are transformed into leaders after they become agents of classroom change. Their classroom environment will encourage revolutionary possibilities never imagined by students in a teacher-centered situation (Miller, 2005).

Incorporating Student Leadership in Innovative Ensemble Classrooms

Musical Futures, a project being conducted in the United Kingdom, incorporates classroom strategies rooted in instrumental pedagogy and is concurrently reflective of constructivism and democratic classroom practices. Moving beyond the teacher-conductor ensemble classroom described by Shively (2004) and Freer (2006), this project depends largely upon student leadership within the classroom. Price (2005) identified

effective learning strategies for the *Musical Futures* instrumental classroom: an emphasis on aural learning; large group ensemble performance; peer coaching and apprenticeship models; student derived materials that include composition; students as leaders, and music teachers as re-emerging musicians.

The first major research discovery of *Musical Futures* indicated the need for improvement in musical leadership among students (Price, 2005). The teacher's role needs to be reframed to that of a facilitator and an enabler of student creativity. Ensemble-based music education has long fit a model in which trained music teachers educate the gifted/talented or persistent student within formal schooling. This model serves declining numbers of students throughout their public school experience. Price defined formal education as traditional schooling. Non-formal education is supervised by adults, but it takes place outside of school, or another formal setting. Informal education is led and organized by young people with no supervision. The first fundamental of *Musical Futures* was to transform musical leadership from the teacher-as-donor/student-as-recipient model to a more flexible arrangement. The goal of this was to create a climate of mutual respect that may be inhibited in the formal music education setting.

Price (2005) indicated that students must have real ownership of the musical repertoire and that students must be allowed to interpret classical music. Although composition may be encouraged, it is not the ultimate goal of the instrumental classroom. In fact, the objectives of instrumental study in *Musical Futures* include aural learning and music reading as a foundation for creativity, along with the development of performance skills. Additionally, students learn performance skills on a range of instruments. The instructors in the *Musical Futures* program are introduced to more diverse teaching skills.

These practices are consistent with Finney's (2003) suggestions that learning should be physical, active, and correctly paced for the learner. The experience needs to be both engaging and weighty and therefore valuable for the students.

Overcoming Student Resistance to Changes in Role

Cushman (1994) suggested that although students need to take a more meaningful part in their education, they are sometimes puzzled about this new role. It remains the responsibility of the teacher to provide scaffolding when necessary to assist in the transfer of classroom control from teacher to student. Cushman described stages of student empowerment that include a spectrum of student reactions, including euphoria, confusion, doubt, derision, distrust, and excuses, until they reach a genuine stage of empowerment.

Conclusion

Research has illustrated the increased educational value in classroom models where teachers are the facilitators and students are active participants in the learning process (Sarasin, 2006). Chapman et al. (2006) suggested that students have an instinctive need for influence over their environment.

> If students are provided opportunities and challenges to give their thoughts, opinions and ideas, the claim is made that relationships within their school environment among peers, students and adults will be full and rich, producing a positive school culture where students feel valued. (p. 7)

Learner-Centered Classrooms

Though consistent with the philosophies of Dewey, the learning theories of Vygotsky and the current work being conducted by *Musical Futures* and others, the learner-centered classroom environment is not a new initiative. Child-centered learning was advocated as early as the late eighteenth century by Rosseau, Pestalozzi, Hegel,

Herbart and Froebel (Henson, 2003). Though child-centered learning has long been associated with young children, the concepts are applicable to learners of any age. In the learner-centered classroom, children are given opportunities to help develop, pace, and guide their own learning experiences (Turner, 1999).

Despite European advocacy for learning that focused on what was best for the child, Colonel Francis Parker found the American education system to be entrenched in rote memorization when he began teaching after his service in the Civil War. His sponsorship of learner-centered techniques while superintendent for the schools in Quincy, Massachusetts, led to their demonstration in district wide teacher meetings. Parker was asked to share his "Quincy System" with Boston and, eventually, with Chicago after becoming the head of the newly formed School of Education at the University of Chicago (Henson, 2003).

Continuing Parker's reform movement, Dewey and his wife established a laboratory school in 1896 in conjunction with the University of Chicago. By 1901, both Parker's University Elementary School and Dewey's Laboratory School were functioning at the University. After Dewey transferred to Columbia University, influential faculty members of Teachers College popularized Dewey's educational procedures (Warde, 1960/2005). Dewey exerted considerable influence on public school education in the early 20th century, and learner-centered education was considered superior to traditional education until the launching of Sputnik in 1957. Progressivist and learner-centered education was blamed for the disparity between American schools and Russian educational initiatives, and critics pushed for a return to traditionalist education (Henson, 2003).

Goodlad (1984/2004) discussed the curriculum reform movement in the 1950s and 1960s that brought together university professors, secondary school teachers, and experts on human development who shared a common goal of designing rigorous methods and high quality materials for teachers. The new curriculum was designed to provide a substantial part of the teaching. Staff development was instituted to train teachers to use these initiatives but was soon non-operational because it was never linked to university teacher-training programs. In spite of this deficiency, Goodlad described this movement as the best endeavor up to that point for revitalizing teaching and learning because it encouraged collaboration between university professors, secondary school teachers, and human development specialists for the creation of high quality curriculum.

By the late 1980s and early 1990s, a "crisis in education" was identified by our country's leaders. The American Psychological Association Presidential Task Force for Psychology in Education was charged with the responsibility to share its research knowledge with others to make teaching more effective for educators and policy makers (McCombs, 2003). This task force advocated the development of learner-centered practices that shifted the focus from the instructor's teaching to how students learn. A possible indication of the value of this work is signified by a recent synthesis of 119 person-centered studies by Cornelius-White (2007). Cornelius-White's report concluded: "learner-centered teacher variables have above average associations with positive student outcomes" (p. 134). Currently, learner-centered practices are widely researched in regard to science (Black & Deci, 2000; Curry, Cohen & Lightbody, 2006; Tsai, 2007; van Driel, Bulte & Verloop, 2005), language arts (Movitz & Holmes, 2007; Reeves, 1997), mathematics (Beswick, 2005; Hannafin, 2004; Opdenakker & Van Damme, 2006), and

technology-oriented classrooms (DeRoma & Nida, 2004; Emes & Cleveland-Innes, 2003; Figg & Burson, 2005; Hancock, Bray, & Nason, 2002; Lee, 2006; Notar, Wilson, & Montgomery, 2005), but little literature is available about incorporating these practices into the music ensemble classroom.

Components of Learner-Centered Education

Learner-centered practices require teachers who are cognizant that learners construct their own meaning (Narum, 2004). *How People Learn* (1999) reported that learning in these classrooms is viewed as the construction of a bridge between the learner and the subject matter, and the teacher in a learner-centered classroom watches both ends of that bridge. The incorporation of student as leader would be welcome in such an environment. Narum (2004) stated, "A learning environment that is developed from such insights is distinctly different from one that sees the student as a passive recipient of information transmitted from a teacher" (p. 1). McCombs (2003) suggested that teaching practices must be flexible. Students are partners in the learner-centered experience and, as such, they provide worthy information. Teacher questions should seek knowledge, promote understanding and invite reflection because these higher order questions lead to new knowledge about how each student learns (Harris, 2000). As educators, we would like to believe that all schools are learner-centered, but there is much evidence to the contrary (Delaney, 1999).

The philosophy of a learning-centered school is that of a learning association in which everyone remains an active learner, including teachers. This philosophy will expand teaching abilities and assist instructors in learning through interactions with their students. In this school environment, everything adds to the dominant culture of inquiry

(Rallis, 1996). Accordance with this environment is what Allsup (2003) referred to as "democratic action." This practice gives students the space to explore freely and work democratically so that students can create their own context from areas that intrigue them. If the intent of education is to aid students in reclaiming their "authorship" of the world so that they can contribute to a democratic society, then the social function of music educators is chiefly moral and editorial in spirit (Woodford, 2005).

Vega and Tayler (2005) surveyed 30 educators immersed in the democratic practices of John Goodlad's philosophies. These teachers also demonstrated the will to develop a learner-centered environment. They found that the teaching practices of these educators included peer evaluation, small-group practices, and the establishment of a community of inquiry. Peer evaluation included the completion of an assignment followed by a discussion with a peer about the assignment. This system relied upon the interaction between students and promoted more interaction and dialogue in the classroom. The small group learning practices involved assignments completed by a cluster of students with each student taking a distinctive responsibility within the group. This study ascertained small group learning practices assist students in critical thinking, self-reflection, peer-tutoring, problem solving, and group process skills.

Vega and Tayler (2005) cautioned that teachers must take into account different learning styles when grouping the students, as students with similar styles may work more comfortably together. Students can utilize the various talents of the group to create a more unique approach to the learning situation. Additionally, the change in emphasis from teacher-centered to student-as-leader requires students to reflect upon and contribute more to their own learning. This newly established community of inquiry requires

students to do just that by compelling them to collaborate, question, and restructure meanings.

The Colleges of Engineering and Science at the University of Texas at El Paso have had success in developing a learner-centered environment based on peer support to address the specific needs of their students. Incorporating the assistance of some private engineering programs, they put into place a valuable strategy to extend the leadership and critical thinking skills of a group of students. The experiences faced by this group of students advanced their professional growth and showed students that by volunteering their time to peer tutor, their entire learning community was strengthened (Sanchez-Contreras, Gomez, Ramos, Flores, & Knaust, 2002).

To implement a learner-centered philosophy, educators must have a clear perception of the ideology that guides the concept (Delaney, 1999). This adaptation requires an alteration of viewpoint and the acceptance of a fresh set of beliefs about the art of schooling. The beliefs that once shaped teachers' outlooks are often opposite of what the learner-centered environment will require.

Goodlad (1984/2004) explained that although schools cry out for diverse instructional techniques, society offers no demands to change long-established classroom models because people believe that classes should be conducted using conventional practices. Students who learn to walk in straight lines, listen quietly to the teacher, and follow rules are often valued over those who question authority. Society will easily support schools that follow traditional classroom guidelines, but will interfere with schools that encourage students to act as individuals (Rallis, 1996). The cycle continues because teachers were taught in a traditional way, and although they may be exposed to

alternative practices in teacher education programs, their contact with these methods may be too limited to offer results.

Challenges to fostering a learner-centered environment include time constraints, the reluctance of students to participate because of the disruption to their familiar structure, and the inability of the students and teacher to function in a system of shared control (Vega & Tayler, 2005). Additionally, Dewey (1959) warned against children being asked to create their own education without the resources to do so. Students must be directed through this approach, and not released without guidance. As Dewey contended:

> Nothing can be developed from nothing; nothing but the crude can be developed out of the crude- and this is what surely happens when we throw the child back upon his achieved self as a finality, and invite him to spin new truths of nature or of conduct out of that....Development does not mean just getting something out of the mind. It is a development of experience and into experience that is really wanted. (pp. 103-104)

It will take experience with a learner-centered environment to smooth out these difficulties. Although students may be reluctant to disrupt the familiar and easier routine of allowing the teacher to be in complete control of the classroom, the feeling of student empowerment that will ensue may help them change their attitudes about the transformation. Teachers who are willing to relinquish some control may find themselves as facilitators of learning that benefits both their students and themselves. "In fact, the most effective learner-centered teachers can flexibly shift their role from teacher to expert learner and share the ownership of learning with their students as appropriate" (McCombs, 2003, p. 96).

Schuh (2004) cautioned about overgeneralizations often made in regard to traditional versus contemporary teaching strategies. Classrooms do not necessarily use

one style or another, but degrees of both. Schuh (2003) also contended that learner-centered practices can be effectively enmeshed with teacher-centered practices. Although there are classrooms that incorporate learner-centered concepts to varying degrees, the learner-centered classroom environment deserves further examination by teachers, building administrators, and area supervisors (Delaney, 1999).

Student Perceptions of Classroom Environment

The teacher should create a classroom environment where students listen, respond unreservedly, and all work together toward commonly selected goals (Harris, 2000). Student attitude is a central indicator of whether or not this type of learning environment is effective. Research by McCombs and Whisler (1997) found that students who perceive their teachers to use learner-centered principles demonstrate higher levels of both motivation and achievement. Daniels and Perry (2003) reported that children approve of learner-centered practices, especially if they involved tasks that promote new learning and competence as well as the opportunity to work with peers. A study with regard to music ensemble classroom environment by Hamann, Mills, Bell, Daugherty, and Koozer (1990) suggested that the highest musical achievement is realized in the "student centered" performance class.

Pillay (2002) proposed that both the formal and informal beliefs of the learner influence the way he or she learns within a learner-centered environment. Also, the energy students apply to their learning depends upon their discernment of how this learning will ultimately reward them. Conversely, the results of research by Maroufi (1989) indicated that students' attitudes favor a teacher-centered environment, and that students prefer the firmly structured environment over a generative one. Additionally,

Chall's (2000) research intimated that teacher-centered instruction may promote higher overall student achievement.

Meece (2003) reported that learner-centered teacher practices enhance student motivation and learning. Research conducted by Tsai (2007) indicated that the students of Taiwanese science teachers who focused on student understanding, inquiry, and interactive discussion, all of which are contained within a learner-centered classroom, felt that their classrooms offered more opportunities for peer negotiation, autonomous learning, and student centered activities. This study also reported favorable student perception of these practices. Teachers who conduct class without consciousness of their students' attitudes may force students to experience monotonous classes with extraneous content. This type of classroom environment can cause students to fail (Brooks & Brooks, 1999).

Summary

The learner-centered classroom environment incorporates principles of democratic and constructivist learning theories, encourages student leadership, supports motivational learning techniques, and appears to be generally valued by students. Because the learner-centered environment may not have been presented or modeled during a teacher's schooling, educators may not be aware of these benefits. This is especially true for the music ensemble classroom, where the teacher-conductor/teacher-centered model remains prevalent, partially because little research is available that proposes other possibilities for instrumental music classroom environments. It is up to music education researchers to test current learner-centered theories and disseminate

findings about ensemble classrooms that enrich, enliven, and advance students to reach the apex of their abilities.

CHAPTER 3

METHODS AND PROCEDURES

Mixed Methods Design

This study incorporated a mixed methods design. As stated by Creswell and Plano Clark (2007), "Mixed methods research provides strengths that offset the weaknesses of both quantitative and qualitative research" (p. 9). They describe mixed methods research as follows:

> [Mixed methods research] focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. (p.5)

This study is based within a conceptualization of research as an objective analysis of classroom procedures and outcomes. Mixed methods design was selected because the questions of this study required multiple forms of data to gain an accurate picture of findings. Quantitative data included large-group performance evaluations and a survey of student perceptions. Qualitative data included (a) bi-weekly classroom observations, (b) weekly journals entries by teacher participants, and (c) student focus group interviews.

Creswell and Plano Clark (2007) maintained that the most frequent and familiar approach to mixing methods is the Triangulation Design. This design is used to allow the acquisition of diverse but corresponding data with regard to the same topic. Creswell and Plano Clark identified four variants within the Triangulation Design: the convergence model; the data transformation model; the validating quantitative data model; and the

multilevel model. This study utilized the convergence model of Triangulation Design (see Figure 2), which allows the researcher to collect and analyze qualitative and quantitative data separately and then congregate or converge the results from the two types. This model was used because it incorporates comparisons of qualitative and quantitative results. "The purpose of this model is to end up with valid and well-substantiated conclusions about a single phenomenon" (Creswell & Plano Clark, p. 65).

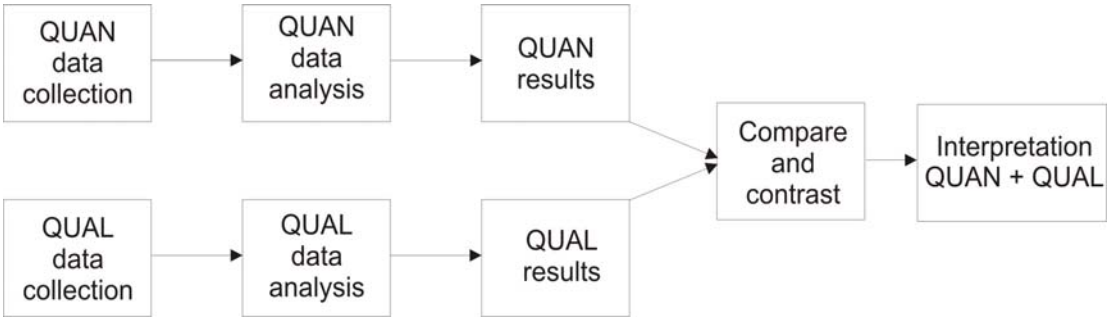


Figure 2. Triangulation Design: Convergence Model (Creswell & Plano Clark, 2007, p. 63)

In the convergence model, the researcher consults other researchers with expertise in either qualitative or quantitative methodology to assist in analyzing the data (Creswell & Plano Clark, 2007). If there is disagreement between the qualitative and quantitative data, the customary resolution to this is to show both findings in parallel and maintain that more research needs to be conducted (Creswell, 2003).

Procedures

The purpose of this study was to compare the learning outcomes of a learner-centered (L-C) orchestra classroom environment with those of a teacher-centered (T-C) orchestra classroom environment. The study took place in four orchestra classes of two

middle schools in a large suburban school system in the southeastern United States. At one school, orchestra teachers were allotted two classrooms. One teacher was trained to integrate L-C techniques in her eighth-grade classroom. The other teacher implemented T-C instruction in her classroom. The second school had only one orchestra room, and the teachers shared instruction. At this school, each instructor taught a portion of both the L-C and the T-C classes, and both were trained in L-C classroom practices. During the research study, one teacher took primary responsibility for the designated L-C class and one took primary responsibility in the T-C class. This design provided a unique experience for each teacher participant and contributed to the richness of qualitative data collected.

Classroom Learning Environments

Learner-Centered Environment

Teachers in the L-C classrooms incorporated a learning environment that integrated democratic and constructivist classroom practices. L-C teachers were instructed by the researcher on strategies to encourage active learning, student engagement, student-as-leader, student choice, independent musicianship, and making use of each student's unique talents (See Appendix A for professional development session training materials.). Additionally, teachers of L-C classrooms were trained in techniques to encourage student autonomy, reflective thinking, student conducting, and small-group collaboration. Students in this environment were offered the opportunity to be empowered by the orchestra faculty as musical leaders within their classrooms.

An important aspect of L-C classrooms is to encourage students to become musically independent learners. To support this aim, L-C teachers maintained an active

facilitator presence in their classrooms, offered scaffolding during independent practice, and continued learning collaboratively with their students. Not only did these L-C teachers offer scaffolding during independent practice, they also continued learning along with their students. The structure of the L-C model is shown below (see Figure 3).

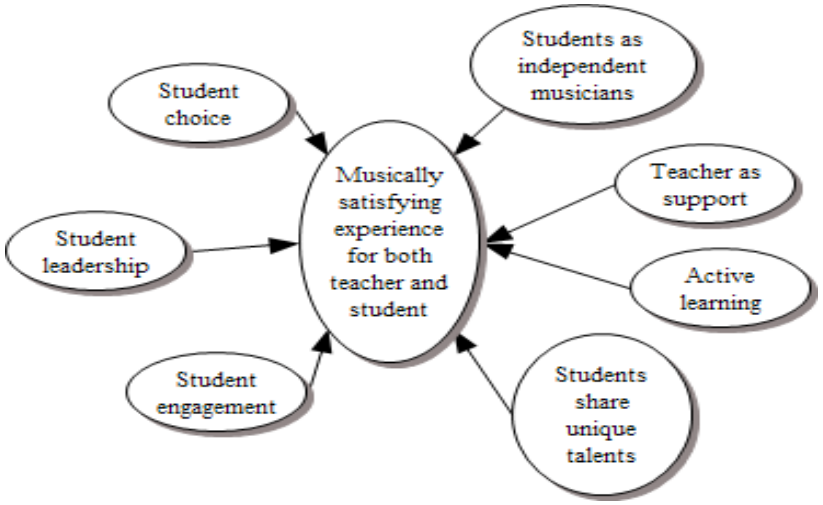


Figure 3. Learner-centered classroom environment.

Teacher-Centered Environment

Teachers using the T-C model taught from the historic and prevailing teacher-conductor model. This is the model they had been taught in pre-service preparation programs. T-C teachers directed students in what, when, and how to play, critiqued students' performance, and maintained their status as content experts. Students in the T-C classrooms were expected to learn their parts, sit quietly while not performing, and follow teacher directives.

From a professional music education perspective, the longstanding teacher-conductor/teacher-centered model has been assumed effective on the basis of assessments

of polished student performances. To demonstrate success, school orchestras are expected to receive ratings of excellent or superior at yearly performance evaluation events sponsored by an organization such as their state music educators' association. The individual learner is not necessarily considered, and teachers may or may not have heard students play individually. Thus, performance outcomes may be measured at evaluation events, but ongoing learning outcomes and growth, student dispositions, and teaching-learning process are rarely considered. Many administrators accustomed to a T-C model view these performance assessments as indicators of student learning and teacher effectiveness. They also believe that successful performances are the result of more orderly classrooms. I observed the orchestras at both middle schools prior to soliciting their participation in the study and documented that the existing orchestra programs at each participating school fit the description of a T-C classroom model. A review of adjudication ratings indicated consistently strong performance assessments of superior or excellent at the annual large group performance evaluations conducted in the school system.

Learner-Centered versus Teacher-Centered

Though both L-C and T-C classrooms may aspire to presenting fine performances, the essential difference between the two environments lies in the manner in which these performances are achieved. L-C classroom environment encourages student autonomy. T-C classroom environment focuses on teacher delivery and authority (see Figure 4). This familiar rehearsal situation is the one generally assumed to be appropriate by administrators, community, parents, and ensemble students.

For the integrity of this study, T-C teachers maintained explicit T-C classroom practices throughout the data collection period. I discussed the importance of this with each T-C teacher during the professional development sessions, prior to the beginning of data collection, and during interviews. I also documented this continuity through observations. In the school where both teachers were present in both L-C and T-C classrooms, it was particularly important that they not allow L-C practices to affect their T-C approach. To address this concern, each teacher created separate lesson plans for the class in which she took leadership (L-C or T-C). Consequently, though the same music content and skills were covered every day in both classes, the methods used to achieve daily objectives and the classroom environment were distinct.

Ensemble Classroom Instructional Components		**L-C Classroom**	**T-C Classroom**
Objectives		Determined by teacher and student collaboration	Teacher selected
Repertoire		Selected by teacher and student collaboration	Teacher selected
Classroom Physical Environment		Varies: Small ensemble grouping, sectional grouping, professional ensemble model	Based on professional ensemble model
Concerts		Teacher and student make musical decisions using peer assistance, student musical leadership, teacher and student collaboration	Teacher makes musical decisions; teacher directed; teacher conducted
Musical Critique		Students are encouraged to listen carefully and offer frequent verbal or written critiques and solutions to problems	Teacher provides all or most critiques and solutions

Figure 4. Ensemble instructional components and methods used to achieve each.

Participants

Hillside Middle School and Lakewood Middle School were chosen because the large numbers of students in their programs allowed for the scheduling of at least two classes of string orchestra students and because at least one teacher in each school indicated a willingness to establish an L-C environment. Additionally, as reported in the school descriptions, the demographics for both of these schools are similar (Georgia Department of Education, n.d.). Participants in this study included the students in the classes, the teachers of the classes, and the researcher as participant observer. Student participants were from four intact, string orchestra classrooms and were in their third year of string ensemble instruction. Though the participating schools were located in the school system in which I teach, I was not involved in instruction of these students prior to the start of this study.

Hillside Middle School

Hillside Middle School is located in a racially heterogeneous community of mixed income levels. Approximately 2,200 sixth, seventh and eighth-grade students attend. Twenty-five percent of these students participate in orchestra. School ethnicities are 42% White, 24% Asian, 20% Black, 11% Hispanic, and 3% Multiracial. Twenty-three percent of students receive free or reduced lunch.

Hillside Middle's connections (electives) classes are offered on a modified block schedule. Orchestra classes meet on Monday, Tuesday, and Friday for 40 minutes. Orchestra classes also meet 80 minutes on either Wednesday or Thursday, according to class assignment. At Hillside, eighth-grade orchestra students are divided into three separate classes to make use of a second classroom available daily. Only eighth-grade

"intermediate" classes were involved in this study. During the study, students worked concurrently with their assigned L-C or T-C teachers. Ability and achievement were not considerations in the placement of students in ensembles. Players were placed with their designated teachers by the school's computer scheduling program.

Lakewood Middle School

Lakewood Middle School is located in a racially heterogeneous community of mixed income levels. The school has approximately 2,500 sixth through eighth-grade students in attendance. Twenty-one percent of these students participate in orchestra. School ethnicities are 58% White, 14% Asian, 13% Black, 13% Hispanic, and 3% Multiracial. Twenty percent of students receive free or reduced lunch.

Lakewood Middle's connections (electives) classes are offered on a regular daily schedule. Orchestra classes meet every day of the week for 50 minutes. At Lakewood, eighth-grade orchestra students were divided into two separate classes by their teachers. Classes were not determined by performance ability.

Hillside Teacher Participants

At the time of the study, Ms. Miller had taught middle school orchestra for four years. Ms. Young had one year of prior experience. Both teachers gained all of their teaching experience at Hillside Middle School. Ms. Miller's educational experience includes a Master of Music Education degree and an Educational Specialist degree in Leadership and Administration. Ms. Young holds an undergraduate degree in music education.

Lakewood Teacher Participants

Ms. Burton has 10 years of teaching experience, all at Lakewood Middle School and holds a Bachelor of Music Education and a Master's degree in Arts Integration. Ms. Cherry has 11 prior years of teaching both middle and high school orchestra and holds both a Bachelor's degree in Music Performance and a Master of Music Education degree. Prior to the study, she worked at Lakewood Middle School for three years (see Table 1).

Table 1

Teacher Participants

School	Learner-Centered	Teacher-Centered
Hillside Middle School	Ms. Miller	Ms. Young
Lakewood Middle School	Ms. Burton	Ms. Cherry

Choosing Teacher Participants' Roles

Prior to starting the study, I talked with the teacher participants about their roles in the study because I felt they needed to be involved in the assignment of L-C and T-C roles. This study required significant modification of teaching practices, making it necessary for the L-C teachers to be secure with adapting instruction. At Hillside Middle, Ms. Young continued in the T-C model with which she was comfortable while Ms. Miller felt confident she could employ L-C practices. Upon being introduced to the L-C teaching practices, both Ms. Burton and Ms. Cherry at Lakewood Middle School were equally intrigued with the thought of adapting their instruction. Ms. Cherry, however,

felt that Ms. Burton would be better at the additional paperwork involved with being the L-C instructor, so she opted to be the T-C class instructor.

Researcher's Role

Schensul, Schensul and LeCompte (1999) define researcher participation as the "presence in and interaction with a site when an activity or event is occurring" (p. 92). This research required that I be the primary data collector as well as a participant in the study. The nature of the research demanded that I engage in a powerful and continued relationship with participants. I began this affiliation by training L-C teacher participants at their respective schools. I continued our association through bi-weekly classroom observations and interviews over a five-month period.

Creswell (2003) noted that qualitative research is interpretive and requires the researcher to reveal personal values, interests, and biases about his or her research. I have been an orchestra teacher at the middle and high school levels for 22 years. My perceptions of secondary school string orchestra education have been shaped by my experiences in the field. I incorporated a learner-centered environment in my classroom as the result of a study completed for a Specialist in Education degree and have continued this practice from the 2001-2002 school year to the present. Because of these experiences, I have developed an enhanced awareness, knowledge of, and sensitivity to the challenges and issues faced by teachers and students during the study.

These previous experiences potentially contributed certain biases to this study. These biases could have influenced my view and the analysis of data. Although I feel that a learner-centered classroom may enhance the orchestra experience for the student and teacher without a reduction in the quality of performance, I remained open during the

study to the possibility that the findings of my study might not confirm my personal experience. By adhering to principles of rigorous quantitative and qualitative design and by maintaining a clear audit trail that allowed me to constantly reflect on my own biases relative to findings, I ameliorated the potential effects of my own biases.

Actions

I gained entry to the schools by using the lead string orchestra teacher at each of the two schools as the gatekeeper. Because this study involved human subjects, I applied for clearance from both the Georgia State University Institutional Review Board and from the school system where the research was to take place before beginning any research procedures. All participants were given consent forms to return if they wished to participate in the study (Appendix B). Students and teachers were advised of their right to discontinue at any time if they wished to do so. All schools and participants were assigned pseudonyms, and their identities remained confidential.

I visited each school on a bi-weekly basis so that the students and teachers grew accustomed to my presence in their classrooms. I also participated in the class as an instrument tuner, player, or tutor when not actively completing observations. I incorporated both member checking and peer review throughout the study by regularly interviewing teacher participants and consulting consistently with fellow music education doctoral students.

Professional Development for Teachers

Teachers of the L-C classes were trained to incorporate learner-centered techniques during January, 2008. I prepared the teachers for this expansion of their classroom practice. Training took place in three one-hour time blocks at each school. The first

session was an informational session designed to present research about L-C techniques. We discussed L-C concepts and classroom practices in an interactive manner and designed examples of how each can be incorporated in the middle school string orchestra classroom. Examples of L-C practices included student composing, student improvisation, student conducting, peer tutoring, employing student written and verbal musical critique, soliciting and utilizing student input, and incorporating student leadership. Additionally, we considered the Checklist of Learner-Centered Teaching Techniques (Appendix C) that each teacher would fill out on a daily basis. The checklist was created as a tool to assist in checking the L-C classrooms' fidelity of implementation. These checklists were also a reminder of possible activities for the teacher and allowed a view into what types of activities were used on non-observation days. Intended to be beneficial, the checklist contained twelve suggestions of L-C activities and allowed space for teachers to record their own practices.

The next sessions were designed to be L-C in practice. I went to each school and observed rehearsals. At the end of each rehearsal, we considered L-C activities that were used and ideas of other activities that could be employed. After three training sessions, I noted Ms. Miller, Ms. Burton, and Ms. Cherry were effectively integrating L-C techniques without my prompting.

Data Collection

The quantitative and qualitative data from this study were collected concurrently. The two forms of data were considered independently of each other.

Qualitative Data

Qualitative data sources are described below.

Weekly journals. Teachers maintained weekly journals in which they reflected on and recorded their views on classroom environment and instruction by completing provided prompts (Appendix D).

Classroom observations. Bi-weekly observations by the researcher noted classroom physical setting, teaching techniques, student reactions and behaviors, and time period allotted to each activity. Through observations, teachers and students became accustomed to my presence in their classrooms. Data collection was done in a systematic manner so that "it [could] be preserved and analyzed by a single researcher or team of researchers" (Creswell & Plano Clark, 2007, p. 115). I utilized an observation form that included time and date, as well as a description of the events and procedures that took place during the class (Appendix E). Additionally, the observation form contained space to note codes and categories as well as any questions that may have arisen during the observation period.

Semi-structured teacher interviews. Immediately after each bi-weekly observation, I conducted ten-minute, semi-structured interviews with the classroom teachers. Interviews were used in a three-fold way: 1) to member-check my observations; 2) to elicit teacher perspectives on their respective classrooms; and 3) to provide embedded professional development, reflecting on the classes I observed as a way of thinking about L-C strategies. The digitally voice-recorded interviews were conversational and focused on classroom behaviors and teaching techniques. The data form completed during each interview included date, time, location, and a list of questions, as well as spaces for notes (Appendix F). Completion of a data form for each

interview kept the research process organized and provided a record of events in case the recording device malfunctioned (Creswell & Plano Clark, 2007).

Student focus groups. To consider the voices of the students involved in this study, five students from both the L-C and T-C classroom environments at each school participated in student focus groups. The focus group interviews were conducted after the students performed their final concerts of the year. The student focus groups allowed students to share autonomous thoughts about their orchestra experiences with regard to class atmosphere, student empowerment, and classroom learning techniques (See Appendix G for interview questions.).

Quantitative Data

The following quantitative data sources were used.

Student Orchestra Environment Survey (SOES). The SOES asked for 19 responses using a six-point, Likert scale design (Appendix H). It was administered three times: prior to the start of the study, at the study's midpoint, and end of the study. Each independent item on the researcher-constructed SOES asked for student views in regard to L-C and T-C classroom techniques. Questions were designed to gauge student preferences for both L-C and T-C classroom techniques. There were no cumulative scores on the SOES. Rather, each item was scored across participants to determine group means.

Performance Assessment Instrument (PAI). At the conclusion of the study, each orchestra class performed and was scored, using the PAI, by three experienced string orchestra adjudicators plus the researcher. The PAI, an instrument developed by expert music educators, is used by the Georgia Music Educators Association's (GMEA)

Orchestra Division to assess student performance, and has seven criteria (Appendix I). The criteria include tone quality, intonation, technique, interpretation, balance, musical effect and "other factors" (music choice, discipline, and appearance). The PAI allows the performance of each musical work to be graded on each indicator, with a final rating of one (superior) through five (poor), thus giving an accurate view of each adjudicator's assessment of every selection, rather than a composite reflection of the entire performance. Scores were totaled and final ratings were determined by scores.

Data Collection Timeline

Data collection began in January 2008, at the conclusion of teacher training. Collection of data through observations, interviews, and SOES was ongoing according to the previously mentioned schedule and continued through the performance of adjudicated concerts in May, 2008 (see Figure 5).

At the end of the data collection period, all four string orchestra classes performed three selections for assessment. The music selection procedure was the same in both schools. Together, the L-C and T-C teachers at each school agreed on six acceptable selections. Students in L-C classes chose three concert selections from the six acceptable options. T-C teachers offered students no choice in music selection, performing the three selections chosen by the L-C group.

Qualitative Data Analysis

To allow timely emergence of categories, observations and semi-structured teacher interviews were transcribed immediately after visits to the schools. Teacher journals were collected at the end of the data collection period. I analyzed observation and interview data on a weekly basis to identify developing categories and codes in

relation to the research questions. While analyzing data, I created memos to assist with interpretation of data. Dated observations and interviews were maintained, in order, in a locked filing cabinet at my home office. Recordings were destroyed immediately after they were transcribed.

Month	Data Collection Activities (Calendar Order)
January, 2008	Professional development for teachers First administration of SOES Classroom observations and interviews begin
February, 2008	Classroom observations and interviews continue
March, 2008	Orchestras participate in Large Group Performance Evaluation Second administration of SOES Students participate in music selection Classroom observations and interviews continue
April, 2008	Classroom observations and interviews continue
May, 2008	Classroom observations and interviews continue Hillside Middle School spring concert Lakewood Middle School spring concert Orchestra classes are adjudicated using the PAI Third administration of SOES Student focus group interviews Teacher journals and checklists are collected

Figure 5. Timeline of data collection activities.

To establish trustworthiness, I incorporated member checking by regularly interviewing teacher participants to ensure on going data analysis of observations and interviews reflected the reality of their experiences (Lincoln & Guba, 1985). Peer debriefing occurred via discussions of observation, journal, and interview data with two music education doctoral students trained in research methodology.

After data collection was complete and interview recordings from the student focus groups were transcribed and coded, a preliminary analysis was performed. All of the coded data were then grouped into possible categories/themes. Peer reviewers met to review the coded and categorized data. In accordance with the convergence model of Triangulation Design (Creswell & Plano Clark, 2007), qualitative data were then compared with quantitative findings.

Quantitative Data Analysis

Student Orchestra Environment Survey

Results of the SOES (Appendix H) were tabulated, using their L-C or T-C designations, after students completed each survey. The student answers from the monthly student surveys were input into SPSS by the researcher. Descriptive statistics, including mean and standard deviation, were run for each individual question. A two-way mixed ANOVA was performed for each item of the SOES to determine any difference ($\alpha = .05$) between the L-C and T-C classes. To determine reliability, Cronbach's alpha was executed for each administration of SOES. Findings and reliability statistics are reported in Chapter 5. Survey results were protected in the same manner as the observations previously described.

Performance Assessment Instrument

Analysis of the final performance was made using the assessment instrument (Appendix I) filled out by the adjudicators. Using final numeric ratings for each group, L-C and T-C means were determined and compared. An inter-judge reliability rating was performed to determine consistency of measure. Findings and reliability statistics are reported in Chapter 5. The performance evaluations assisted in answering this study's central question regarding learning outcomes. After the qualitative and the quantitative data were collected, they were compared and contrasted for final interpretation of the results.

Data Convergence

For this stage of analysis, I compared the qualitative and quantitative data to ascertain to what extent they did or did not support each other (Creswell & Plano Clark, 2007). As a qualitative validation technique, discrepant data are reported in Chapters 5 and 6 (Creswell, 2003). Emergent themes were tested through peer debriefing and member checking against all data.

To confirm fidelity of implementation, teachers completed daily checklists of L-C principles and strategies (Appendix C). Teachers were expected to demonstrate implementation of at least two L-C strategies in a given class period. Self-reports, observations, and interviews indicated that teachers were implementing L-C principles and techniques on a continuing basis and with increasing confidence and success throughout the study.

The main question of this study regarding learning outcomes (see p. 10) was answered using the PAI, observation, teacher interview and journal data. Supporting

questions were addressed using data from teacher journals, student focus groups, teacher interviews, observations, and the SOES. Reporting is consistent with Creswell and Plano Clark's (2007) assertion that comparisons can be made by viewing similarities of qualitative and quantitative results within a discussion section. Convergence also allows a statistical result to be followed up using quotations or themes that support or refute quantitative results.

Summary

The objective of this study was to compare and contrast the learning climates and outcomes of two divergent learning classrooms relative to a teacher-centered environment and a learner-centered environment. This mixed methods study encompassed a data collection period of five months. At the end of this time period, qualitative data were analyzed for emergent themes in reference to the process. Quantitative data were analyzed for relevant group differences over time to ascertain the impact of L-C principles and strategies. Data were compared and contrasted to assess the similarities and differences between the two environments. Qualitative findings are presented in Chapter 4. Quantitative findings are reported in Chapter 5. Questions of the study will be answered using convergence of qualitative and quantitative data. Data convergence, results, conclusions and recommendations for further study are discussed in Chapter 6.

CHAPTER 4

PRESENTATION OF QUALITATIVE FINDINGS

Introduction

Using qualitative data, Chapter 4 presents an "insider's view" of the orchestra programs at two middle schools. Participant teacher journals, student and teacher interviews, and observation records were used to construct rich descriptions of four orchestra classrooms during the course of the study. Descriptions of classrooms are organized by selected dates reflecting the progress of the study. Dates vary by schools according to differing patterns of emerging data during the course of the study.

Looking in on Schools

Hillside Middle School

The outside view of Hillside Middle School was cluttered with modular classrooms that accommodated the school's large student population. The huge parking lot was filled with the cars of the school's extensive faculty and staff. Exterior walls of the school were brick but contained many full-length windows. Inside the lobby, next to an inviting seating area, a secretary screened visitors from her desk. Hallway walls were decorated with student-designed murals, along with posters of events, pictures of staff members, awards, and individual student achievements. The brightly lit hallways were wide enough to accommodate masses of students as they moved to their connections classes by grade level. Signs along the walls reminded students to walk to their classes without talking. Teachers, armed with notepads, were posted every few yards along the

hallway to assign a "silent lunch" punishment to students who forgot.

Ms. Miller's orchestra room was clean, spacious, and brightly lit, with many musical posters on the walls and two decorated bulletin boards. The carpet was newly installed, and the room had recently been painted. Entrances to three practice rooms were located on the perimeter of the classroom. Two practice rooms contained violin and viola racks. Cello and bass racks were located on the perimeter of the main classroom.

Ms. Young's orchestra room was slightly larger than Ms. Miller's. Her room was neatly set up with three semi-circles of chairs. Several posters hung on the freshly painted pale yellow walls and there was a decorated bulletin board at one side of the room. There was one large violin and viola storage room on the side of the classroom. Cello racks were located on one wall. Extra chairs and music stands were stacked in one back corner of the room. Daily class goals, written by Ms. Young, were on the whiteboard at the front of the room.

Lakewood Middle School

Lakewood Middle was housed in an old, sprawling building located directly off a busy highway. Even though the building had recently undergone renovation, a village of modular classrooms sat on a hill to the right of the school to relieve overcrowding. To avoid narrow hallways during class changes, children spilled outside to utilize the school's many breezeways.

The busy orchestra room was brightly lit and contained stained, worn carpeting. Walls were decorated with music laminated posters. Contest information signs and a large poster filled with confiscated chewing gum were located on the wall by the teachers' office. A large ceramic bulldog, re-decorated to coordinate with each holiday

or orchestra event, sat on filing cabinets located between the two classroom doors. Because the two instrument rooms offered inadequate instrument storage space, the room's perimeter was lined with violin, cello, and bass racks.

The orchestra room was of adequate size for the eighth-grade classes, but always remained set up for the much larger sixth grade classes. Chairs were crammed together in semi-circles. All stands were marked with instrument and seat number. The abundance of equipment allowed little space for students to unpack and set up. In the corner, between cello racks, was an outside door that was often left open during fair weather. Viola and cello students often favored this door for quicker access to their seats. In front of the classroom, the white board always contained daily goals.

Inside the Classrooms

Ms. Miller and Hillside's Learner-Centered Classroom

February 28, 2008. I have just completed my second observation of Ms. Miller's L-C orchestra class. By this point in the study, Ms. Miller has been incorporating L-C techniques for five weeks. My first two observations yielded markedly contrasting pictures of the two classrooms.

During my first observation, I was struck by the way in which the very set-up of Ms. Miller's classroom reflected a traditional teacher/conductor approach. She sat at a podium in the front of the room, with students seated in neat semi-circles around her. They quietly followed her instructions. A T-C behavior management strategy seemed to work effectively, with an apparently positive response among students when Ms. Miller occasionally placed a marble in a container. The marble represented the teacher's

judgment that students were behaving or performing well, and a requisite accumulation of marbles yielded a prize, such as doughnuts, pizza, or candy.

Ms. Miller asked her students to write daily goals on the board. There was a great deal of discussion and laughter as students complied with her request. After students had chosen the selections they would work on that day, Ms. Miller asked them for suggestions of what to work on within the pieces. A first violinist pointed out four measures that were difficult for her section. The bass player mentioned that the class's page turns created too much disturbance. A cellist suggested they should try for more pronounced dynamics. When the students ran out of suggestions, Ms. Miller asked them to play the first piece. The class played straight through the music. I noted that the students had correctly assessed those areas of the music that needed work but did not work on what was suggested. After performing each piece, Ms. Miller asked for student critique before they moved immediately into the next selection.

Later in the period, Ms. Miller's class recorded themselves playing their concert selections, and each student completed an adjudication form after listening to the performance. Though I observed that the class had incorporated several L-C techniques, I realized the students were merely following Ms. Miller's directions. Although Ms. Miller had asked her students to think for themselves, it appeared that most were dependent upon her.

During the interview following the first observation, I asked Ms. Miller about how she felt her students responded to the L-C techniques.

> Some of the students take the opportunity to, to be, I don't know, just wallflowers. And, I think those students would probably be wallflowers if it was teacher-centered as well. Um, some of the activities do engage

> those students. When we did the adjudication forms, some of the students were right there. When we did the objectives, they turn off their brains.

We discussed students' discomfort when creating musical objectives and how they may disguise it by laughter. We noted that this was a new experience for students who have relied on teachers to establish objectives. Ms. Miller offered her perception of classroom's environment.

> Letting the kids get up to the board with a marker was silly and some of the suggestions were silly, but it wasn't disruptive silly, it was…they were having a good time and so I didn't mind. When we did the adjudication forms, again, there was some silliness, but I think that that actually kind of adds to the learner-centered, you know, class environment because it is fun and it can be silly and not disruptive whereas in teacher-centered, the kind of comments they were making may have gotten away from the topic, here it was all about them.

Two weeks later, at the second observation, I noticed a clear change in Ms. Miller's classroom approach. Though some of the orchestra students were with Ms. Miller in the main classroom, cello students worked on their parts in a separate practice room. When the cellos returned to the main room, viola students left to practice without a reminder from their teacher. Ms. Miller played her violin along with the students in her room, and when their playing was no longer together, a student spontaneously began to tap the beat for the class. A violinist asked for help on a difficult section of music, and Ms. Miller invited a peer tutor to assist. The peer tutor picked up her music stand and led the other student into a vacant practice room. After five minutes, both students returned to their seats in the main classroom. Ms. Miller quietly asked if everything had worked out, and the violinist said she was better able to understand the difficult part.

During the interview, as we reviewed the L-C activity checklist, I asked Ms. Miller to talk about ways she was implementing L-C strategies. She reported that she had

begun trusting her students more and was encouraging them to take more responsibility for their own learning. Ms. Miller shared an example of her class's reaction to integrated L-C techniques.

> I did not have any particular learner-centered activity planned but two violas came up to me in the hallway before class and asked if the violas could go into the practice rooms so they could work on one of their LGPE [Large Group Performance Evaluation] pieces. They just did that by themselves. So, they're starting to take a little ownership.

Ms. Miller said that her students were leading the method book exercises, tutoring their peers, leading sectionals, and playing in small ensembles. Ms. Miller said that she felt less stressed about her teaching and increasingly comfortable with new student-initiated tasks. I asked if she could explain why she felt this way.

> It's not like you're giving them the responsibility, because I mean you're still responsible for what they're doing and when you send them in the practice room, you're hopefully giving them like a goal to shoot for. I don't know, something about this year is much more relaxed, much calmer, happier, more fun with [performance evaluation], just better…

April 3, 2008. We are about halfway through the study at this point and I have conducted two more observations in Ms. Miller's class. The change I noted in the second observation has continued to develop. Ms. Miller's students are consistently engaged. The marbles and container have disappeared from the room. During my fourth observation, Ms. Miller was conducting individual performance assessments. While waiting to perform, students were actively assisting others with their parts. Upon completing assessments, students would move to practice rooms to work with their instrument sections. When the entire class came together, they worked on spring concert music that the students had selected, and the excitement and energy in the room were palpable. There was a clear feeling of collaboration. Though their teacher was on the

podium, she functioned largely as a coach and mentor rather than a directive teacher. She asked higher level questions, encouraged critical thinking, and urged students to be problem-solvers. Rather than identifying problems herself, she asked students to isolate things that needed to be worked on, and students eagerly shared their opinions. My transcribed notes report: "This group has grown from a class of just students listening to a teacher, to a community of workers and leaders together."

During the subsequent interview, Ms. Miller was enthusiastic in describing how L-C techniques had empowered her students. She said that dividing students into small groups had aided group progress on skills and musical development. Her trust in the students had grown and she was feeling increasingly confident in their ability to self-diagnose and self-correct. She observed:

> L-C strategies have empowered my students and given them some extra views. You know, when your peer says to you, "Oh, I can help you with that section," it's a little easer to take than when I say the same thing. You know, it's a friend saying, "Hey, I'll show you how to do that". I think it's nice to get that second opinion from a peer.

She perceived a change in her students' outlook and explained that they seemed to feel they had more control in class.

> I think their attitudes are so much better now. They really get into the music. They love the mini-orchestras. They love getting together in small groups and playing their orchestra music all the way through. I think their turn-around has a lot to do with this learner-centered approach where they have a little more control. Maybe they feel a little more involved and it's really changed their attitudes.

Ms. Miller said that integrating L-C techniques in her class had proved so rewarding that she had begun to incorporate several of the concepts with her other classes.

> I love the techniques. I'll mostly use them in eighth-grade because they have the foundations to lead themselves more, but some of the activities can be started very early in sixth grade. I have sixth graders unpacking and lining up for tuning on their own, and they help pick objectives for the following day. They also provide informal evaluations of our pieces.

I asked if encouraging more student involvement in decision making had altered her perceptions in regard to student achievement.

> I don't know if it changes how I feel about their learning. I feel like they're learning the same. Like, they, we would accomplish the same thing, but they're doing it in a much more fun way. We're getting to the same spot, but they are loving it. And, we would have gotten the music the same level, but they may not have been as happy with it because I would have told them everything to do and I would have been the one talking the whole time and now they get to help each other out and I think they have more fun.

May 1, 2008. I conducted my final observation of Ms. Miller's classroom. When I entered the room, I saw six ensembles engaged in small group rehearsals. According to the daily goals on the board, the class had already finished method book exercises and worked on three concert selections. Each "mini-orchestra," composed of varying size and instrumentation, was rehearsing spring concert music. While one large group had all instruments represented, one of the smaller groups had only violins and violas. Another group had several violins, a viola and two cellos. Ms. Miller walked around the room observing while groups were practicing, and, infrequently, students would ask for her assistance.

Evidence of rehearsal objectives and leadership roles fluctuated from group to group. One large group reviewed pieces by playing through them. There did not appear to be a definitive leader. Instead, after finishing one selection, every member of the group would shout out another selection until enough agreed on the next piece. While playing the music, if one instrumental section would begin to stumble, the other sections

continued to play until the next transition. At that point, everyone got back together as a group.

A member of another small ensemble worked on a bowing with his peers for several minutes. He asked the members of his group to isolate the bowing. They played it several times. When one member played it wrong, he asked that student to play it slowly by himself. The "leader" modeled the bowing for the student and then asked the student to play it along with him. After the leader felt the student could play the bowing, the group played the bowing together and moved to another section of the music.

A group of four girls spent much of their time trying to decide what to play. After playing several measures of one piece, they would stop and try another. Ms. Miller came by and talked with them about their goals for the ensemble. The ensemble agreed that they needed to pick one selection and work on difficult parts if they wanted to accomplish their task. After their brief discussion, the girls agreed upon a selection, and Ms. Miller remained with them for several minutes to watch their rehearsal. After they played through a passage of music and were engaged in work on a fingering, Ms. Miller moved to another group.

Students appeared comfortable asking peers about fingerings or bowings. When a group was unable to agree on a solution to a problem, they would request assistance from the teacher. Throughout the remainder of the class period, each group remained engaged in the activity in their ensemble and appeared oblivious to what was happening around them.

When I interviewed Ms. Miller, she confirmed that the class had worked together on method book exercises and several concert pieces at the class's onset. Ms. Miller told

me her students had created the daily objectives they worked on at the beginning of the class period. Students had also suggested working in mini-orchestras for part of that day's class. I asked if she had assigned students to particular ensembles that day, and she indicated that students had chosen their own groups. Ms. Miller said she was pleased that each group had picked members who could work well together. She added that groups had chosen their goals, and she saw her role as a coach for groups who needed help. Ms. Miller remarked that her students had made good progress on notes, rhythms, and bowings that day when they met as a large group, but also after they broke into small ensembles. She said:

> They tend to work on stuff that I wouldn't even think about. I thought we had covered a difficult bowing in class, but one group rehearsed it over and over again. That's good because I may not have gone over that any more in class. So, they pick stuff that I may not pick because they know what they need to work on. So, yeah, it works out really well.

Ms. Miller was surprised by those students who emerged as leaders. Though she had expected her most proficient players to become classroom leaders, she found that they were not necessarily the ones to step forward. One violinist, who had struggled with his music in seventh grade, regularly asked if he could lead method book exercises. As he gained confidence, his leadership and his performance skills improved. He had not planned to play in high school, but after leading class and sectionals, he now talked about becoming a music teacher. She elaborated about classroom leadership in her interview:

> Some people I thought would be leaders really aren't. They really take a back seat in some of this. One boy has always struggled in here but since we started these techniques, he does the leadership roles and it's helping him become a better violinist. I thought E_____ would have been a leader…not a leader at all. Won't, doesn't want to participate in activities where kids lead class or sectionals. She's always well-prepared and she's a great player but it just doesn't equal a good leader. So, some surprising leaders have definitely started to emerge. I don't know why.

I asked Ms. Miller if she could sum up how she felt using L-C techniques had changed her classroom environment.

> They were my toughest class last year and I came to them this year with some resentment and dread. I only taught them that first quarter and it was okay, and then went on [a six-week maternity] leave. When I came back, I started the L-C techniques and the class changed. Their attitudes were still there, but channeled into something more productive…And now, they're the class that I feel does the most at the end of each day. It's definitely a different atmosphere in here, and a different atmosphere from my other classes.

Ms. Burton and Lakewood's Learner-Centered Classroom

March 6, 2008. I have completed three observations at Lakewood Middle School. From my first observation, I watched Ms. Burton smoothly integrate L-C techniques into her daily routine. While working on a warm-up chorale, Ms. Burton asked front row students to lead the orchestra without counting out loud. Rather than remain on the podium, she moved behind the viola section so students had to watch their section leaders. The class practiced starting and ending by watching the scrolls and bows of the front row. After they successfully played the chorale, Ms. Burton asked, "What did having student leaders require you to do?" The class responded, "Watch each other."

Ms. Burton moved to the podium and directed the class through a phrase of concert music. After they played the phrase, she asked students to verbally critique their performance. A student suggested the class clap one phrase to repair a difficult rhythm. Another student suggested that each individual section clap the phrase. Ms. Burton asked the class what they thought would work better and the class decided, by a show of hands, that each individual section should try the phrase. Each section stood and clapped their phrase. After this was completed, one fourth row second violinist suggested they play the phrase to see if the rhythm was better. Several students across the classroom thought this

idea would work, so a student counted off, and they played the phrase. When Ms. Burton asked her students if they thought it went better, most responded affirmatively.

Ms. Burton concluded class by recruiting leaders for the next day's sectional. She asked sections to plan their strategies. "Talk amongst yourselves!" she directed. Each section complied by huddling up and choosing several trouble spots to fix. After several minutes, Ms. Burton asked each group to record their choices on the board for use during the subsequent class.

At our consequent interview, I asked Ms. Burton how she thought using student leaders affected their chorale performance. She expressed surprise at how well her class played together on their own and that she thought this exercise had helped their intonation. Not only did she notice a positive change, but so did her students. She felt that she was adapting comfortably to L-C techniques, but mentioned her concern with student pacing. I assured Ms. Burton that it was appropriate for her to incorporate scaffolding to assist the students through these first stages. As they became better diagnosticians and grew more confident with their leadership abilities, she could withdraw her support.

When I arrived for my third observation, a student was on the podium leading a call-and-response warm up using rhythms from their concert music. Students hurriedly unpacked to join the student leader. Another student gave announcements, following which, the class quickly dispersed (outside, cafeteria, hallway) for sectionals. Pre-arranged student leaders ran rehearsals. Prior to rehearsal, each had chosen the LGPE selection he or she would like to work on during the sectional.

In the main classroom, Ms. Burton walked around the violins and adjusted poor position or posture. Several students took the podium during rehearsal. The leaders would choose the section of music to be played and then count off the beats for the class so they would enter together. If one of the student leaders faltered and looked to Ms. Burton for assistance, she offered help but withdrew as the leader gained confidence. Student leaders offered suggestions from the podium, but other, non-designated leaders analyzed intonation or bowing issues from their seats. Constructive ideas were offered not only by students seated in the front rows, but from students seated at the middle and back of the section as well.

When I talked with Ms. Burton after this rehearsal, we discussed her use of student leaders. Ms. Burton said that a student volunteer would take the role for several days. I asked why she used a volunteer for more than one day at a time.

> Every day they do it, they're a little more confident and they get better at it. The ones we've had are gung ho. One girl was leading, and, on the second day, she came in and said, 'Okay, last night I looked at my music and I want to do this.' She had actually gone home and done a mini lesson plan of how she wanted to start the class.

Ms. Burton observed that her students handled musical situations much better than she had anticipated.

> I thought, 'Well, that's exactly what I would have done', so the kids aren't missing out by me not suggesting it. They're getting more out of it and certainly they get quieter. Like when [student] was leading the class, I noticed they got quieter for her quicker than they do for us…especially some of the kids that aren't always [on task].

She was also pleased that her students were working collaboratively and not waiting for a teacher reminders.

> At the beginning of class, they look out for each other a little bit more because I think they've taken more responsibility than the [T-C] class.

> They're better about having their music and a pencil on their stand and they remind each other, 'Do you have your music; did you mark your part?" When we ask them to mark a part, I've noticed they will check each other without us even asking. Some of them will just turn around and mark their neighbor's part. There's a lot more looking out for each other now.

Since Ms. Burton worked with both L-C and T-C classes, I asked her thoughts on planning for each.

> I don't think it's harder to plan for learner-centered. I think you have to plan differently and you have to remember to ask your students, which is something we weren't used to doing before. I don't think it's harder, I just think it's different. And so that might mean for right now, in a way, we're planning for two classes. But next year, when we can do [L-C] with both groups, then it's actually not going to be that different at all.

Though Ms. Burton said she found using L-C practices effective for teaching and learning, she also said it was difficult to relinquish control.

> It's hard not to jump in and take over sometimes. Um, I think we're still working on that. And like today, we're a week from LGPE (Large Group Performance Evaluation) and we need to just use every ounce of time we have effectively, and so we do tend to jump in a little bit. It's a little more teacher-centered right now.

I asked if she thought it took more class time to use L-C practices than to have a T-C classroom.

> I think it takes more time. It takes the kids longer sometimes to get through what we would get through, but they may get more out of it, so in the long run it saves time. We may not have to work on it as much in class, but it does take a student longer to lead a sectional than it would take us. But, if they're focused more, and they're paying more attention, there's a little bit more buy-in because I do think it engages more kids.

She was nervous about taking extra time, Ms. Burton explained, because of their upcoming performance evaluation. Though she wanted to allow her students autonomy, she felt that she could not quite relinquish control until performance evaluation was over.

April 18, 2008. Ms. Burton had been integrating L-C practices for almost three months. I observed more student leadership opportunities on every visit. My fourth observation fell the day after Ms. Burton's class received the music for their spring concert. To select music, they sight-read eight pieces of music selected by Ms. Burton, then voted as a class to choose their five favorite pieces.

After student-led warm-ups and student-led announcements, which were similar to the experiences previously described, Ms. Burton divided students among six small ensembles to work on their new music. The six groups were of various sizes and had mixed instrumentation. She did not assign them to a location, but asked them to gather with their group. Practice rooms and the hallway location were filled immediately, and the remaining groups found spots around the classroom's perimeter.

Once they had separated into areas around the classroom, the differences between groups became evident. Several groups started playing immediately. Other groups spent time discussing what to play and what sections needed work. One group floundered until Ms. Burton stopped by their group and guided them in creating an action plan. Although Ms. Burton did not assign leaders, almost every group seemed to have one or two students who naturally took charge.

My observation notes from March 27, 2008, comment on the excellent teamwork I witnessed. The leaders of several groups kept their groups playing constantly, whether it was to read through the music or to pinpoint a difficult section of music. My notes also remarked on Ms. Burton's supporting role: "It appears to me that having mini-orchestras requires much harder work from the teacher than being on podium and having the whole class play together."

As I noticed in several prior observations, this class ended with what Ms. Burton called a "debriefing," where students had the opportunity to discuss what they accomplished in their ensembles. Students said their ability to observe the following was unique to mini-orchestra rehearsals: hearing other sections' parts while playing, fluctuations in tempos and rhythms, and having to cope with varied instrumentation. When asked the most effective way to accomplish goals, students agreed that they had isolated musical passages and heard each section play its part. The debriefing session ended with a collaboration to decide what sections of music needed to be worked on in class the next day. One student asked, "Are we gonna do this again?", and appeared happy when Ms. Burton assured him that they would.

My interviews with Ms. Burton became much more substantive and rich as the study continued. We discussed at a much higher level how students had become fully engaged in musical decision making and peer interaction. Ms. Burton reported that her students showed much higher levels of interest, and motivation was no longer a concern. Students simply came to class ready to take action on the objectives of the day. Ms. Burton still laid out clear learning objectives for each lesson, but she also asked the students what their objectives were for a given class period. Typically, there was considerable conformity between her ideas and those of her students, but not always. I asked her what she thought about the level of collaboration between teacher and class. "I think they feel validated," she said. "They are making choices and we're listening to them and we do what they ask to do. So, they do feel more like it's their class and not them playing and us teaching."

We talked about the students who had become leaders over the course of the study. Ms. Burton expressed her astonishment over the students who had emerged as leaders.

> Kids I never thought would get involved are raising their hands to volunteer to lead. One boy raised his hand today to be the section leader for the violas tomorrow and I was amazed that he was willing to do that. Another little girl came up to me and said she wanted to do the second violins next time. Last week the same girl told me she didn't know if she could ever do that but now she's like, 'I'm ready.'

At our final interview, I asked Ms. Burton if she could summarize her experience integrating L-C techniques.

> I think that it's helped me understand that they're more capable than we think they are. It's like, we can let them go. In fact, we've got to let go. We've taught them for almost three years, and if they've paid attention, then they've got a lot of equipment and tools they can use and we should let them.

Ms. Young and Hillside's Teacher-Centered Classroom

March 27, 2008. I have completed three observations at Hillside Middle School. My trips to Ms. Young's T-C class have all yielded similar data. On a typical day, Ms. Young stood on the podium with a violin nearby. Students were seated in semi-circles around her. Each class began with Ms. Young helping to tune her students' instruments. After she was satisfied with the open string pitch, students worked on scales. Ms. Young wrote difficult scale fingerings and intervals on the whiteboard for her students. Students played their daily scale until Ms. Young was satisfied with their results. After scale practice, Ms. Young asked her students to play assigned method book exercises. If there was a problem within an instrumental section, Ms. Young played violin with that section to help them hear the correct pitches. This daily warm-up routine usually lasted for approximately twenty minutes. The remainder of each class was spent working on

performance music she had selected. Though Ms. Young often played violin with her class, she also clapped, stomped, adjusted her students' fingers and directed. Ms. Young demonstrated an extremely high energy level during rehearsals with her class.

I observed considerable performance progress from Ms. Young's students as they prepared for their yearly performance evaluation. Students in the class displayed varying degrees of rehearsal engagement. Front and second row students remained attentive. Students who sat in the back rows often talked to their stand partners, and several would not bother to pick up their instruments when asked to play. When the back row students played, instrument position and posture were often poor. In my notes from February 27, 2008, I wrote, "The teacher remains focused and keeps the pacing at a reasonable level. She is working very hard but the class never seems completely engaged in what she is doing. This class plays well, however, when they play."

During her interviews, Ms. Young often seemed tired and dispirited. She mentioned uncertainty with regard to her conducting techniques. She said, "Oh, I feel like I'm like giving them everything with my body motion. I'm not sure if that's getting in the way of them learning or if it's actually helping them." It appeared that Ms. Young directly related the quality of her conducting to her class's performance.

Each interview began with a discussion of pedagogical techniques, but the main focus that evolved in each interview was around discipline issues. In her second interview, Ms. Young remarked:

> I like that class as whole. But there's always about four to six kids, and my whole cello section, who are lazy. Some of them don't participate, they don't sit up straight. I mean I can see that they're not interested.

Ms. Young also talked about a cellist who purposefully made notes sharp to evoke her reaction. She said, "They know how to get to me and I respond to it."

April 23, 2008. Large group performance evaluation was over, and Ms. Young's class had been learning their spring concert music for over a month. The classroom atmosphere appeared to vary with the selections they were playing. When working on a well-known "pop" hit, the entire class appeared energetic and focused. Students sat up straight and picked up their instruments immediately when Ms. Young requested. All students were playing, including everyone in the back row. Though students played correct notes in the appropriate style, incorrect rhythms were an issue that forced the class to a halt many times. Ms. Young could repeat a rhythmically challenging section again and again, however, and students remained with her.

Students displayed a different attitude when Ms. Young asked them to take out another piece. The room filled with groans. Several of the back row students refused to play and began talking to one another. One student checked the clock and loudly said, "Twenty-five MORE minutes?" The cellists slumped in their seats and muttered to each other about what music pieces they would have preferred to play. As soon as Ms. Young moved to the next piece, from a suggestion by several cellists, the mood in the room shifted back to the positive direction displayed during the day's first rehearsal.

In the interview that immediately followed this rehearsal, Ms. Young mentioned her concern with the amount of music they had to learn for their spring concert. She felt that her class would not have enough rehearsal time to perfect the entire concert repertoire.

> I don't know how much time we should spend on book exercises, because we gave them about six pieces of music to learn. When we give them

> loads and loads of music, I think the kids feel that, 'Oh, we're just getting the music, so I don't have to be exact. I don't have to be perfect." So, I would like to spend a little more time on music to make things right before concerts.

She felt that her students stayed better engaged during spring concert rehearsals because they liked the spring concert music more than their performance evaluation music. Ms. Young still felt something was lacking in her rehearsals. She pondered, "If I go see Ms. Miller's class, it's like most of the class, like 99%, they're all attentive and she uses little stories. It's just, something is very different. I don't know exactly what it is." Ms. Young observed that she never felt she achieved quite the correct balance with her class that year. She suggested discipline issues as one reason this may have occurred. In her final interview, Ms. Young talked about a possible remedy for this situation.

> Much focus was to the students that made trouble and not the ones that were being responsible. I need to be stricter so the students' time isn't wasted by listening to me talk to 15 percent of kids only. Also, with myself, I need to learn to accept that I'm a teacher and they're students. My job is to discipline and teach.

Ms. Cherry and Lakewood's Teacher-Centered Classroom

March 6, 2008. Three visits to Ms. Cherry's class have yielded similar observations. Students came into the classroom and quickly found their seats. Intonation, rhythm, and group cohesion were very good throughout rehearsals. Students were exposed to composers and various musical genres on a regular basis. Ms. Cherry and Ms. Burton, who assisted, described this group as having excellent performance skills. They both maintained, however, that this class was difficult to control with "almost too many leaders".

Objectives (the same objectives used for Ms. Burton's L-C class) were on the board when students entered. Ms. Cherry started each class as the leader of call-and-

response exercises. Individual students were selected to play a teacher-chosen rhythm of the week and were rewarded with candy for a successful performance. The class period continued with a focus on concert music. This part of the rehearsal followed a predictable rhythm: Students played, teacher critiqued, students tried again, teacher critiqued, students played until teacher was satisfied and moved to another section of the piece. I noticed students were engaged when playing, but tended to talk if Ms. Cherry stopped to work with another section. At our first interview, Ms. Cherry concurred with my impression of her class's engagement.

> With this class, we found that you have to keep them occupied and when we broke into sectionals one time, they loved it, I think because they got to play more. But it's hard whenever you want to stop if you have to fix things. This class is better the more you play.

At our third interview, after a particularly trying rehearsal, she elaborated on this issue.

> You know, they're like puppies. It's hard to get their attention anyway, so it's difficult when there's a lot going on because it takes away their attention. Sometimes you have to work with one section and I ask the others to shadow bow, but then what can you do when they don't even shadow bow? That's something I continue to strive to fix as we probably all do.

Though Ms. Burton was lead teacher of the L-C class, Ms. Cherry assisted. Knowing that she worked with both classes, I asked Ms. Cherry about the advantages she thought T-C instruction brought to the classroom.

> There are advantages because you can get to the things you want to address quickly. A lot of times with student-focused, it takes longer to get to that point. [When I direct class] I can just say, "Measure whatever", and then give them immediate feedback as far as what I want, so that is definitely an advantage, I feel.

I asked her if she thought incorporating L-C techniques slowed progress.

> At first it did, partially because we had to introduce the L-C concepts to the students and train them on how to get into that routine. Also, it took us

> a while to get comfortable with the idea of students being more in charge as well as to understanding how to incorporate these techniques into our teaching. I guess the teachers have some control issues! Eventually, the process became more stream lined and took less time.

May 8, 2008. There was one week left before both classes presented their final performance. I observed three rehearsals of spring concert music. Rehearsals followed the pattern previously described for Ms. Cherry's T-C class, and I noticed significant performance improvement on their selections during this observation period. The accuracy of notes, intonation, and rhythms had increased. She had also worked with her class with regard to the stylistic concerns of the music. Though the class was performing well, if any instructional lag time occurred, students would talk with each other. To combat this, teachers kept a rapid pace in class.

My final observation occurred on a day when students were working on solo music in sections. A teacher was in charge of each section and led students through their piece. Teachers modeled a phrase and students repeated it. After each teacher finished with their lesson, students were allowed to individually practice their music for several minutes before class ended. When students practiced on their own, they changed from the passive listeners they had been moments before when a teacher had guided their lesson, to active learners who partnered with peers to assist each other with intricate fingerings.

During Ms. Cherry's interview, we discussed aspects of the Lakewood T-C and L-C classrooms. In one interview, Ms. Cherry discussed her dissatisfaction with T-C classroom behavior issues.

> It frustrates me sometimes when they aren't attentive and you're trying to teach them some kind of specific rhythm like we were doing today. It's frustrating because you have to go back and re-teach it several times. I

> don't know a good way to do that as far as, you know, other than to have them play it slowly and to go through and to have them clap the rhythms and that kind of stuff. But when they don't listen it's very frustrating.

I wondered if she had noticed the same behaviors when she worked with Ms. Burton's L-C class.

> I think it's more difficult when you're just trying to do some really basic things…but probably to a degree a little bit easier in the learner-centered [class] because they understand they have certain responsibilities.

This was not the first time Ms. Cherry had mentioned that she had seen benefits to a learner-centered approach.

> I definitely have to say as far as the more that I do this, the more we do the student-focused, I am seeing the benefits of the student-focused and integrating those into our [L-C] classroom has become a lot easier. At first I was a little leery as far as how to do it, but I've definitely, definitely seen the results and have been very pleased with that.

Students Speak Out

At the end of data collection, student focus groups were interviewed to allow students a chance to voice their thoughts. Five students from each class were randomly selected from among those who had turned in their parent permission forms. Each focus group was asked the same initial questions (see Appendix F). Follow up questions were extended relative to participant answers.

Hillside's L-C Students

Ms. Miller's focus group students were in a lively mood as we set up a practice room for our interview. Angel, Brittany, Cathy, Jacob, and Larry all got chairs for themselves and moved instrument racks so we could be in a circle while we talked. When asked to tell me about how Ms. Miller teaches class, Angel spoke up.

> I think she's a pretty good teacher 'cause she listens to what we have to say when we're in class. She'll ask us what we want to do sometimes.

> Whenever we are doing exercises, she gives us a choice of who wants to lead other than just her sometimes.

I asked them if they had noticed anything different about orchestra since winter break. Cathy mentioned that many scales and exercises had been introduced that semester to get them ready for high school. The whole group agreed that they felt these scales had given them foundations necessary to continue playing with or without a teacher.

Angel said that the class had been incorporating mini-orchestras, and Jacob mentioned sectionals. Larry thought that both mini-orchestras and sectionals were helpful because each small group situation required students to hone different performance skills. He qualified this by saying that the benefit of the experience was directly related to the quality of his assigned group members. Angel pointed out that group leaders could help even less skilled groups to perform successfully.

> You always need to have that one person who's like, "Okay, we need to this", or "Okay, we need to do that". Because otherwise, everybody would just go their separate ways and then you might as well not even have the group.

Cathy agreed that every group needed a leader, but she said that leaders were rarely appointed: they just took over. I asked if they liked this, and Jacob responded by saying that his level of satisfaction varied depending upon the student who took control. Though some students were effective leaders, others were not.

I asked Ms. Miller's students if they felt like they had a choice about what they worked on in class. Jacob, Cathy, and Brittany all said they did not. Larry pointed out that Ms. Miller asked them to put goals on the board. Although the other four agreed with him, they still felt they did not have a choice about what they would work on in the

music. Throughout my observations of Ms. Miller's class, I noted that students chose daily music goals so I probed further. After another minute of discussion, Larry said, "Well, most people don't care except for like one or two. So, some people say all the stuff." The others all agreed with Larry. They elected not to participate in choosing goals, and, because of that decision, felt they weren't offered choice. They did, however, feel that they got a choice in voting on spring concert music selections even though each person might not like every song that was chosen.

To conclude the session, I asked Ms. Miller's students if they thought mini-orchestras, sectionals, and working independently had improved this year's orchestra experience.

Bernadette: Did you like all of the new things you tried?

Students: (in unison). Yes.

Bernadette: Did it change your experience in orchestra to do all that?

Jacob: Um hm.

Cathy: Yes.

Bernadette: Do you feel more in control of what you do now, or not?

Angel: We have more of a choice when we do those kinds of things.

Brittany: Yeah, because we could play whatever we want.

Larry: It's more democratic.

Lakewood's L-C Students

I met with Barb, Cindy, John, Tom, and Nat in a small orchestra storage room. They were very subdued when we began our conversation. After the students started speaking, they observed that this semester, their teachers had allowed them to work in

groups with student leaders, vote on their music, and had offered other performance opportunities. They all agreed that they liked these changes. I asked them to explain why this appealed to them.

Nat: Because it gave us a choice.

Cindy: A break from the teachers.

Tom: It was something else to do.

Nat: It was more interesting; more variety.

Bernadette: Am I hearing you say that eighth-grade wasn't the same for you as seventh and sixth grade in orchestra?

Barb: It kind of gave us a way to see what the rest of the orchestra was thinking.

Cindy: Yeah, we were more independent.

Barb: We weren't just working with our sections; we were working with different ones, too.

Cindy: In the years before, we kind of played really old, icky music but this year we got to play better music.

Bernadette: Is that because you got to pick it?

Cindy and Tom: (in unison). Yes.

Barb mentioned that all of these [L-C] experiences would have been easier if their whole class had worked as hard as those in the focus group. The rest of the group was in agreement with Barb's assessment.

Having been in class together for more than two years, the focus group felt secure trying new experiences within their orchestra class.

Cindy: We've all known each other since sixth grade, so….

Barb: We're not worried about what to say.

Tom: Around each other.

Barb: Around each other, yeah.

Bernadette: So you all feel comfortable enough that this is like a safe place and you can say what you want?

Cindy: It's just like our big, old group of buddies.

Ms. Burton's students felt that, among the skills they had attained in eighth-grade, sight-reading, shifting, practicing, and vibrato would assist them most with future performance. John and Tom both thought that being section leaders had helped them feel they could continue playing on their own. Though Barb, John, and Tom had been section leaders, Nat and Cindy did not have the opportunity to lead. Both expressed regret about this. All of these players, however, felt confident they could organize and lead a small ensemble. I asked about the perfect balance between having a teacher and working independently.

Barb: Maybe one day a week we should break into groups. Then, every other day, [play] as a whole orchestra. But, I think we should be able to pick our groups and not so much punishment for the kids who want to get stuff done, and have to wait on kids who just do orchestra so they don't have to worry about what class they're gonna be assigned to next time.

Bernadette: Would you like to have a constant group?

Students: Yeah.

Nat: That way you could become more comfortable with your surroundings and like one day a week we could just work on what we needed to do.

Tom: If we didn't just do it by [instrumental] sections, that would help a lot, too. So, we'd learn the other pieces, and we would know where [other instrumental sections] are, and, if we get lost, we could catch up.

Bernadette: Would you want to have a leader appointed, or do you find that one naturally emerges every time?

John: Naturally emerges, yes.

Tom: One naturally emerges.

The students observed that their teachers were always around to offer assistance during sectionals. Though some were appreciative of the support, others wanted their teacher to establish rehearsal guidelines and let student leaders take over.

John: They gave us guidelines once while we were working in sections.

Nat: Then they were still there.

Cindy: They were still there, still coming in, "Oh, let's do this part." Um hm.

Tom: Yeah.

Cindy felt that independent practice was another beneficial use of class time. In this way, students could choose sections of music most advantageous for their individual needs.

> When they gave us that solo piece, they just kind of let us do it on our own because then we knew what we ourselves have to work on and not what everybody has to work on. It makes it easier to accomplish it ourselves.

Ms. Burton's class voiced strong opinions on the most constructive way their teachers could introduce new music.

Barb: I want the teacher to play it through.

Cindy: Yeah, play it through or put it on the CD so we can hear what it sounds like. 'Cause if we don't know what it sounds like, it's hard to get the feel for what we're playing. That's why we do so much better on songs that we know.

Barb: Like at LGPE, we played the song for four months.

Tom: Yeah, it was a lot easier because we knew how it was supposed to sound and we could play it right.

Bernadette: How do you think a teacher could incorporate playing sections that need work with playing the whole piece?

Tom: Start on the easiest spot and play through the hard spot and stop on another easy spot.

John: So you get a better view of what's around it.

Cindy: I know that we're pushed for time, but I don't like it when they have us play a difficult section and then they stop us right after we get done with it. They just stop us out of nowhere and then they get mad at us…

John: But we should stop.

Cindy: We should stop, but…

Barb: They should have a little more sympathy for their students.

Hillside's T-C Students

David, Rachel, Sushmi, Tiffany, and Mike all crowded into Ms. Young's office so we could talk about their orchestra class. I asked them to tell me about a regular day in their class.

Rachel: We warm up in the book, and then, um, we play scales and then we play our songs.

David: All of what we're going to do for the day is written on the board when we get in.

Tiffany: We have to tune first thing when we come in.

Rachel: Oh, yeah.

Sushmi: Oh, and she usually gives us little breaks between the songs so we don't have to play non-stop for the whole day.

Bernadette: Do you like that, the little breaks?

Students: (in unison). Yeah.

Bernadette: Is that the way you've always done it? Since sixth grade, have you always done class like this?

Students: Yeah.

All of Ms. Young's focus group students thought they could organize a small ensemble, but when I asked if they could perform in public, they were less confident. They also felt they had the skills to continue playing, but thought it would help them at first to have their teacher guide them through the music. The focus group students felt that Ms. Young was a vital source of information when learning new music. They were adamant, however, about their desire to play the entire song the first time – stopping only if the class got completely lost – so they could get a whole view of the piece.

David said he would like for their class to work in sectionals, like Ms. Miller's class did. Tiffany agreed and said it would be good to have the teachers check in on sectionals to make certain they were playing the music correctly. She also felt some students in her class might not focus on music if they were offered too much

independence. Sushmi expressed her worry that class might be chaotic if students were left in charge. David felt that students tended to take advantage of Ms. Young.

The longer we were together, the more the group speculated on changes they could incorporate into class.

Bernadette: What would you like to do by yourself in class?

Sushmi: Well, we could probably warm up on our own.

Tiffany: Yeah, we want to focus on the little sections and it's kind of hard to do it in the big group.

David: As a big group, she really only hears the people that mess up and then we all have to go back and work on those parts even though you may be messing up a different part.

Tiffany: I think a couple of days a week we should have ten to fifteen minutes at the beginning of class as a time for stand partners to work together on parts we can't play.

Sushmi: Well, with Ms. Young, they might take advantage of her if we do that.

Bernadette: Do you think that would be any different than when she does warm ups and people just don't do them?

Tiffany: They don't do them either way, so I think you should make it available for the others who are gonna play.

Tiffany: We should go through the entire song unless we get totally confused because then you can see where things are being repeated or where the patterns occur.

David: If you get lost, it would be easier to find where you were if you've played the entire song.

Rachel: Maybe we can stop and work on details when we already get the song, but [Ms. Young] can just tell us what to fix after we play the whole song.

At the end of the interview, I asked if any students had anything they wanted to say about their orchestra experience.

Tiffany: I think with our teachers we have the whole gamut. Like with Ms. Young, she's nice and she doesn't yell at us a lot, but she doesn't control us that well. And Ms. Miller, she lets us do some stuff but she's more like, "You're in eighth-grade; you need to focus and play."

Mike: We have the whole spectrum.

Bernadette: But you like them both?

Students: (in unison). Yes.

Lakewood's T-C Students

Vihdi, Lindsey, Kate, Chelsea, and Carter all laughingly piled into the orchestra storage room for their interview. I asked them to start by telling me a little bit about how their teachers teach.

Vidhi: Well, they're pretty fun, although sometimes they do get mad at us because we talk a little too much. But, they're really fun when they teach us and they do really try to help us.

Kate: It's usually pretty fun, but when they yell at us, we're just usually kind of like, "Oh, just be quiet already; let's play."

Carter: They're vicious.

Kate: Yeah.

Lindsey: We really don't do run-throughs until the last day of the concert. Before every concert we just work on specific parts.

Bernadette: Do you like that?

Chelsea: No.

Carter: Sometimes.

Kate: It's so boring.

Lindsey: Because, when we do that, everyone keeps playing after the teacher tells us to stop and then they get mad.

Vihdi: I mean, it would be nice to do a couple of run-throughs, but I understand why they're doing specific parts because they've taught longer and they think it's better. But, you know, it would be nice, in the middle of the week before we go to our concert, to have two run-throughs.

The students agreed that although they have learned new concepts and different music each year, orchestra class had been following the same routine for the past three years. Ms. Cherry's T-C class expressed their learning preferences with regard to new music:

Chelsea: First I would listen to the song itself, so I can get at least a glimpse of it in my mind, so I know how it's supposed to sound, so then I'll know the style and maybe a little tempo.

Vihdi: Like Chelsea said, I would listen to the actual song first.

Kate: Sometimes you can't find the song when it's just for school orchestras, but if that was an option, I would probably listen to it and go, "Oh, that's how it supposed to sound- not, uh, what I'm doing." (Students laugh).

Lindsey: I'm going with what they said about listening to it first if they have it because, when I know the song, it helps me with the fast parts and the rhythms.

Several of the students felt that playing had helped them overcome stage fright, but most did not feel comfortable organizing or performing in small groups. Kate mentioned her desire to work in small groups during class, and the others added their thoughts.

Chelsea: Like the sections?

Kate: Well, not in sectionals, I want like smaller groups.

Lindsey: Yeah, smaller groups than sectionals.

Bernadette: Like small orchestras?

Kate: Not like three or four people, but maybe like ten or something. If you have small amounts, they could get nervous.

Vidhi: And I'd like to play around myself, and then have the orchestra teacher come back a few minutes later in case I need help. But, I mainly like to work by myself when I'm practicing and then show it to the teacher.

Kate: And people won't get as distracted and constantly be talking and stuff.

Bernadette: If you were in a…?

Kate: Smaller group.

Bernadette: Oh, it's hard to keep everybody's attention together, do you think?

Chelsea: You know, like they'll work on the cellos and the violins get bored and they start plucking.

Lindsey: And then they get mad at us.

Chelsea: Because we're so bored and then we're just like, "Well, what are we supposed to do?"

Students in this focus group were very vocal about not having choice in their class. As Carter said, "We'd just like to have a voice." Vidhi knew that the other eighth-grade class had gotten to choose songs for the spring concert. She pointed out that their class was not offered the same opportunity. Lindsey explained, "That's because 8B [Lakewood's L-C class] doesn't talk half as much as we do."

Ms. Cherry's students valued the few independent learning opportunities they were offered. To prepare for Solo and Ensemble Performance Evaluation (a voluntary activity), they practiced on their own before school. After this year's final concert, they worked on solo music. Lindsey recalled Ms. Cherry giving students time to work on their own to prepare. She said students worked in small groups to prepare. All Ms. Cherry's students agreed that they had gained from that experience.

The students continued to elaborate on discipline issues, incorporating ensembles, and student leadership. As the time was growing short, I asked for any final thoughts.

Vidhi: Well, we'd like to work in small groups and we'd like to have a little more input on our music. But, we'd also like the teacher to be there to guide us through the rhythms and everything.

Lindsey: Because we're not that specialized yet. We still need help.

Teachers' Perspectives

Teacher participants maintained weekly journals throughout the data collection period. Journals were vital because they allowed teachers to record their thoughts on instruction as it occurred rather than only at bi-weekly interviews. Although teachers

answered the prompts provided in their journals, they were free to interpret and elaborate on each question as they wished. The following section offers a peek into each teacher's reflections.

Ms. Miller's L-C Journal

Ms. Miller's journal offered a picture of a teacher incorporating L-C techniques for the first time and her students' reactions to the change in instruction. Ms. Miller's journal entries were generally very positive in tone, but several entries throughout the study mentioned weeks in which she felt her teaching was mediocre. When she felt her teaching had been "average", she reported tired and uninspired students. Interestingly, those weeks corresponded directly with weeks in which she had incorporated very few L-C techniques, according to her completed Checklist of Learner-Centered Techniques.

In week one, Ms. Miller wrote, "Although I thought about ideas to use for student-centered teaching, I only used techniques I've used before." She reported her students as well-behaved and interested in the music they were preparing. By week three, her journal offered a completely different picture: "Using the learner-centered techniques is becoming second-nature and I am unconsciously using them in other classes." She said her students were excited about using L-C techniques, especially activities that allowed them to work in small groups.

After LGPE was over, she wrote that her students spent the next week playing through the pedagogically sound options she selected as choices for spring concert music. After she and her students discussed their musical goals for this concert, they voted to select their repertoire. Her next entry noted that students were excited about playing new music that they love. She wrote, "They smile before we play it." Several weeks later,

amidst "spring fever" for teacher and students, Ms. Miller noted that her students wanted to play the music correctly. "I think they don't want to let me or the class down by playing poorly." She also wrote of her student's "enthusiasm" for student-led sectionals and mini-orchestras.

In week twelve, she enthused, "The students love sectionals and they are pretty excited about playing for the judges next week. They've been practicing hard to learn passages they didn't play well before. They are going to be great!"

Ms. Burton's L-C Journal

Initial journal data from Ms. Burton presented a view from a teacher who incorporated L-C techniques, but was worried what results might occur. Though she allowed her students to make decisions and provide feedback, she mentioned her uncertainty that students would be able to function effectively without a teacher in complete control. A statement from week three characterized Ms. Burton's concern: "This week, I felt the students were good at identifying problems, but they still need work on how to fix these problems."

Ms. Burton wrote about two separate weeks that she felt contained increased numbers of T-C rehearsals. These changes in instruction occurred around the time of performances. She offered the need for quicker pacing and greater efficiency as the reason for integrating fewer L-C techniques on concert weeks. Though her students were not as involved in decision-making during concert weeks, she reported outstanding commitment to their tasks.

Students had not previously been involved in choosing music at Lakewood, and Ms. Burton noted their excitement about being allowed to select their spring concert

programming from among the musical options she provided. After they collaborated and selected their music, she found that students needed teacher support when beginning to learn the new repertoire. She reported, "[Students] were still too overwhelmed by the new music to work very effectively in smaller groups." She planned to work in sectionals during the next week to boost her students' learning.

By the ninth week of the study, Ms. Burton sounded more confident about her integration of L-C techniques. She wrote, "This week I felt my teaching was a good mixture of me as the leader of the class and as a coach of sectional groups and mini-orchestras." Ms. Burton felt her students had improved as independent musicians. She recorded, "This week my class achieved the ability to play through their spring concert music and they worked effectively in small groups and sectionals."

Ms. Young's T-C Journal

Ms. Young's journal offered a detailed record of events that occurred in her T-C classroom during the study's data collection period. Ms. Young viewed the journal as a learning tool and used it to reflect upon and remedy her classroom instruction. She answered prompts about her teaching and her students' reactions, but also included a list of pedagogical achievements for each week.

In her first journal entry, Ms. Young recorded that her teaching was a process of learning through mistakes.

> Last week, for two days, I introduced and taught the F major scale. This Monday, I wanted to see if writing the scale on the board and explaining the half-whole step relationship would click better on their fingerings. It must be too over their heads for Monday morning… A few seemed to get it. Next time, I went over the fingerings for all sections before playing the scale and this seemed to work better.

In week four, Ms. Young wrote, "Students need specific solutions to their problem. Instead of saying 'Play together', say, 'Play with x amount of bow' or same bow speed. This seems to work better."

On week six's journal entry, she noted that praising her students brought about a better classroom experience. "Having fun! Lots of praise and it worked. Told them their pizzicato was New York Philharmonic good and that my eyes were tearing up. Drama! They laughed and enjoyed it." For the next week, she wrote of her desire to improve accuracy of dynamics, rhythms, inner-voice intonation, and keep a steady tempo. The week of LGPE, Ms. Young commented on her class's focus and good behavior. She wrote, "So, they do care about festival [LGPE]!"

Ms. Young worried about the quantity of music her class needed to learn for their spring concert. She noted that she felt rushed while trying to get them through the concert music. Additionally, she mentioned her concern about whether her class could get through the scales and exercises they needed to know when they left for high school. In week ten, Ms. Young lamented, "Could've been more fun and interesting…We did rhythms studies and all d minor scales, but how can we make it more fun?"

Ms. Cherry's T-C Journal

A distinct pattern of teacher and student behaviors emerged from Ms. Cherry's journal entries. At the beginning and middle of each concert preparation period, Ms. Cherry termed her teaching "adequate" or "okay." Her students were described as "unfocused" or "inconsistent." When concerts were only a week or two away, however, Ms. Cherry described her teaching and her students' engagement as "good." For example, in week three Ms. Cherry wrote, "This week, I felt the students were okay.

They worked well on pieces, but got easily distracted." But in week six, as their LGPE concert grew near, Ms. Cherry noted, "This week, I felt the students were good- again they were focused more than usual because of LGPE."

Ms. Cherry used the word "adequate" or "okay" as her teaching descriptor on six different weeks in her journal. When she was asked why she chose the word "adequate" so frequently to illustrate her teaching, she wrote:

> I don't know. Many times I just felt frustrated or that I wasn't getting through to them. I feel like there needs to be some kind of "light-bulb" moment when the students understand or can perform what you have been working on. If I don't achieve that, then I don't feel like my teaching was great on that particular week.

Ms. Cherry also noted that her teaching felt hurried and that she had to keep class pacing fast to maintain student engagement. When her class participated in teacher-led sectionals on weeks one and four, however, she pointed out that, "...it seems easier to keep on task in that setting."

The pattern of behaviors previously described repeated itself during spring concert preparation. In week nine, Ms. Cherry recorded, "I had to really move fast to maintain student involvement and to prevent talking." The week of the final concert, however, she wrote, "I felt the students were focused because of the concert. They seemed to finally be practicing (since the concert is this week!)" Ms. Cherry's journal concluded with praise for her students' performance achievements: "This week, my class achieved a concert of 5 pieces- [they] did a good job!"

Themes

Throughout data collection, I immediately transcribed observations and interviews. Using my notes and memos, I began preliminary coding. At the conclusion

of the data collection period, I requested each teacher's journal. I transcribed focus group interviews, while continuing to memo. After coding journals and student interviews, I began to create categories for codes. I shared my emerging analyses with peer reviewers, who critiqued my alignment of codes, categories, themes, and research questions. The following themes emerged from the analysis of qualitative data.

Theme One: "I" versus "They"

"Instead of Just Listening to Me Talk..."

The first emergent theme, "I" versus "They", grew from disparity of data between L-C and T-C teachers. The main focus of T-C classes was student performance, and this was accomplished through use of the teacher-conductor model. Interview and journal data collected from Ms. Young and Ms. Cherry (T-C) portrayed two teachers intent on improving their pedagogical techniques to enhance student performance. Their data also indicated anxiety in regard to classroom discipline. Ms. Miller's and Ms. Burton's (L-C) data depict a portrait of students' accomplishments. Their journal and interview data discuss how students handled their new roles within L-C classroom situations. The L-C classes' focus was on students' needs and students' learning. Notably absent was concern with regard to student discipline.

Pedagogy. Weekly journals provided for this study asked teacher participants to reflect upon their teaching. Ms. Young's (T-C) journals were very detailed with regard to her weekly activities. She listed pedagogical strategies she had incorporated, such as having to literally move students' third fingers so they would know where to place a G sharp. Additionally, she recorded techniques she would like to try the next week.

Throughout her journal, Ms. Cherry (T-C) wrote about rehearsal techniques she incorporated. The need to keep class pacing fast is mentioned almost weekly. Alternate rehearsal seating was integrated. Sectionals were incorporated with good results. Book exercises were played in Baroque style to perfect a performance evaluation piece. Weekly descriptions of her teaching, however, use the words, "adequate," "very hurried and rushed," "okay," "good," "more laid back," or "fine."

Ms. Miller's and Ms. Burton's (L-C) data focused on their students' weekly accomplishments. Responsibility for learning was placed upon students in student-led activities, and by expecting students to employ higher level thinking during large group rehearsals. Students learned to pinpoint and correct musical difficulties on their own, relying on teacher input less frequently as the study continued. Ms. Burton's journal mentioned she was having trouble giving up control but noted that she was pleased with what students achieved without her help.

Student engagement. Evident in Ms. Young's (T-C) journal and interview data is her worry about her students' engagement. "Some are engaged, trying hard, and focused," she writes, "and some don't care." Observation and student interview data concur with Ms. Young's assessment. Student discipline was a constant issue for Ms. Young. At one point in her journal, she mentioned assigning a mass detention to 19 students. The focus group students also felt that classmates took advantage of Ms. Young.

Ms. Cherry's (T-C) students demonstrated a consistent pattern of engagement throughout the study. When concerts were far off, the class was "scattered" or "easily distracted," but as concerts neared the class became "focused" and ready to work. Her

journal and interviews mention the need to keep class moving at a fast pace to maintain student engagement.

Both Ms. Miller and Ms. Burton (L-C) reported high levels of student engagement in their journals. Ms. Miller wrote that her class was, "very receptive to the new techniques," and that she was enjoying their energy. Ms. Burton described her class as, "very engaged and focused," "thoughtful," "hardworking," and "excited." Throughout L-C journals, interviews, and observations, there is little mention of poor student discipline. Ms. Miller related one occurrence of her students being badly behaved, and Ms. Burton recorded no incidents. This trend is consistent with Kohn's (1996) assertion: "If we are committed to moving beyond discipline, we need an engaging curriculum *and* a caring community. But we need something else as well: the chance for students to make meaningful decisions about their schooling" (p. 118).

Classroom goals. T-C classroom goals were performance-related. These goals were achieved by performing scales, exercises, and concert music as a class until their teachers were satisfied with the outcome. Students were expected to remain quietly in their seats and follow teacher instructions.

Students in the L-C classes were also expected to learn and perform concert music. They achieved their performance goals by taking an active role in class. When working with the whole ensemble, L-C students were expected to critique and correct performance problems. They worked independently with peers in mini-orchestras and sectionals. Teachers provided advice and support rather than control.

"I" versus "They". Data from Ms. Young and Ms. Cherry (T-C) center on their pedagogy and subsequent student engagement. Both struggled with discipline issues.

Their main goals were to have their students enjoy orchestra and perform well. Ms. Young and Ms. Cherry both indicated through journal and interview data that their classroom goals rested on their teaching ability.

In contrast, Ms. Miller's and Ms. Burton's (L-C) data support classrooms that focused on student ownership, student leadership, and student achievement. They spoke of classroom activities that excited their students and of students' accomplishments. Rather than depending upon a teacher's abilities, students incorporated their own skills to help peers. By the conclusion of this study, their L-C orchestra students had evolved from passive listeners to achievers. As Ms. Miller explained, "Instead of just listening to me talk, they're developing valuable leadership skills in orchestra, which will spill over to all of their classes."

Theme Two: Teacher Transformation

"*I am Now a Believer!"*

Three teachers incorporated L-C techniques into their classrooms: Ms. Miller, Ms. Burton, and Ms. Cherry. Although they were willing participants in this study, each had their own preconceived notions about how much they could alter their teaching styles to incorporate L-C techniques.

Ms. Miller's transformation. In previous years, if Ms. Miller (L-C) had to be absent, she would prevail upon another orchestra teacher to take over class. This year, she created a "mini-orchestra" lesson plan (Appendix J) for her students. A substitute teacher was present to facilitate, but Ms. Miller made students aware of her expectations before she left, and they handled class without any problems.

Rather than directing at the podium, as early observation data show, Ms. Miller began to sit in sections and play with them. Upon entering class, students unpacked and set up without prompting from their instructor. Instead of interrupting class to help students who had difficulties with the music, Ms. Miller asked peers to tutor them in practice rooms. Students led sectionals in practice rooms while she worked with other sections in the main room. The class regularly divided into small mixed ensembles to play music they had chosen. Ms. Miller became a facilitator and allowed her students to make musical decisions. She noticed that small ensemble rehearsals offered large musical benefits. Four months after she began this study, Ms. Miller said she felt their participation had promoted positive change in her classroom. "I certainly have enjoyed putting the learner-centered activities into class. I think it's definitely helped the kids."

Ms. Burton's transformation. During L-C training, Ms. Burton confided to me her worries about allowing students too much control. She told me her class moved very quickly so she was concerned about student pacing of class. She also mentioned her apprehension about students having the ability to correct wrong rhythms or notes. By the time her class began incorporating techniques, she was more confident. She wrote, "I'm focusing on how to use student feedback to guide class objectives. It was interesting to see that they tended to think there was a right or wrong answer. I continue to work towards allowing more student control."

In one interview, Ms. Burton talked about her class's reaction to student leadership activities. She noticed that her students handled rehearsal situations in a manner similar to her own. Additionally, students seemed to respond more quickly to student leaders than their teachers. Ms. Burton mentioned her concern with trying to

remain true to L-C principles while watching student leaders struggle. She said, "I have to learn how to read them better. I keep thinking, 'Do I need to bail them out or do I just need to give them ten more seconds?', but I know it will get easier to judge the situation the more I do it." As the study continued, however, Ms. Burton seemed to be more comfortable with her role. Week ten of her journal indicated that she felt her teaching had become a good mixture of classroom facilitation and coach.

As their final concert grew near, she asked student leaders to handle attendance, set up, uniform issues, and troubleshooting for the event and she was happy with their efficient handling of details. Students continuing on to their local high school orchestra have many opportunities for leadership in that program. Ms. Burton thought her students would be "well-equipped" to handle responsibility after their immersion into L-C activities.

Ms. Cherry's transformation. Ms. Cherry's role as lead T-C teacher, while also an assistant L-C teacher, offered her a distinct perspective of the divergence between the Lakewood orchestra classes. At the onset of the study, she felt the T-C classroom offered a faster pace with more immediate feedback than could be achieved in the L-C class.

Soon into the study, however, she realized that the L-C class was responding better to instruction than her T-C class. She said, "I think [T-C students] get off task very easily and they're not as engaged as if you make class more student-focused. If you talk at them all the time, at some point they're going to tune you out." Ms. Cherry did feel that certain personalities in her T-C class contributed to the difference in classroom climate.

By the conclusion of the study, Ms. Cherry was very enthusiastic about using L-C techniques. She felt that her work with the L-C classroom had energized her teaching and offered her a variety of innovative strategies she could continue to incorporate in the future. She contended, "I think any good teacher should always be trying to learn new teaching ideas and techniques."

Ms. Cherry was surprised by the effects of L-C instructional techniques. Her last statements to me were in regard to the L-C class's progress.

> I had always thought the L-C class was the weaker of the two classes. But they made a lot of improvement this year as a class. The only thing I can assume is that having more control in their learning process gave them better results. I am now a believer!

Teacher transformation. Over the course of this study, these teachers reframed their teaching perceptions and began to focus on the learner, promote active engagement, support student choice, and become reflective learners themselves. These characteristics are consistent with the "lived-meanings" of learner-centered educators' as described by Paris and Combs's (2000) study.

Ms. Miller plans to promote L-C techniques next year. She explained, "I think they've been very helpful for the classroom atmosphere and I think the kids really like it…It just gives them so much extra." Ms. Burton plans to use L-C concepts with all her classes next year. "I think we'll definitely use [L-C techniques] more and in some other grade levels as well," she asserted. Ms. Cherry concurs with Ms. Burton. When asked why, Ms. Cherry had this to offer:

> Because ultimately, the students felt like they had a say in what happened in our class and they took more ownership in the end product. That should be our goal as orchestra teachers – to create students who can make music and also know how they made the music.

Theme Three: Development of Student Leaders

"Well-prepared Plus Great Player Didn't Equal Leader"

In this study, L-C teachers encouraged their students to take a leadership role in their classrooms. At first, they had to solicit students to volunteer, but as students became more comfortable with this change in classroom practice, they began to step forward. Though L-C teachers predicted that their most skilled performers would become classroom leaders, they found that this was not always the case.

Empowering students. Ms. Miller's (L-C) interviews and journal entries document her students' gradual empowerment. She could expect her L-C students to critique themselves and offer relevant corrections. Classroom exercises were led by students. Students began to ask for small group opportunities. Ms. Miller also mentioned that pre-concert panic, prevalent before the study began, had dissipated, "by having students feel in control of their performance."

Ms. Burton (L-C) shared similar experiences with student empowerment. An added benefit of student empowerment noticed by Ms. Burton, was the L-C class's ability to monitor each other, rather than waiting for teachers to handle problem-solving. During a Lakewood observation, I heard a bass student ask his teacher, "Did we decide if we are going to pluck or play arco?" I asked Ms. Burton about this demonstration of student-teacher collaboration. She said, "A lot more of the kids that didn't ever want to participate are now participating. I think they feel more validated and I know there's more buy in."

Unexpected leaders emerge. Both Ms. Miller and Ms. Burton expressed their surprise about not only the volume of students who wished to be leaders, but about which

students came forward. At Hillside Middle, Ms. Miller discovered this trend in her classroom. While some unexpected students had taken the lead, the auditioned section leaders she had predicted would become leaders were reluctant to come forward. Ms. Miller described her concertmaster as well-prepared and a great player, but said that these qualities had not equated to student leadership. Ms. Miller said she felt that the leaders who had emerged were capable of handling responsibilities, and their presence had improved the classroom climate.

Both teachers also felt that the "safe" climate in their classroom atmosphere gave students confidence to lead class. Ms. Burton's focus group students agreed with this assessment. Ms. Miller felt that orchestra class offered a nice setting to practice leadership skills and that these skills would be a valuable addition to their life skills.

Student leadership. L-C music ensemble classrooms offer opportunities for student leadership. Students are offered occasion to peer tutor, lead sectionals, and make musical decisions. The emergence of student leaders is an affirmative sign of a cohesive group. Groups benefit when student leaders and teachers function as team, working toward the same goals (Dornyei & Murphey, 2003).

Theme Four: How Students Prefer to Learn

"It Should be Pretty Evident"

Each student focus group was asked how they could best learn a piece of music. Students readily supplied their ideas about how they would like to learn new music. All four student focus groups furnished similar answers.

Play the piece for us. Whether learning on their own or in their orchestra classrooms, students said they would like to hear the piece before they play it. According

to the student focus groups, this could be done by playing a recording for the class, or even by having a teacher play the melody for the class. These students' learning style reflects research by Green (2002). Green describes this method of study as "purposive listening". In her study about learning styles of popular musicians, Green calls their prevailing learning practice one of listening and copying.

Help us get started. Student participants wanted their teacher present as a tutor/facilitator when they start the piece. Students from Ms. Young's T-C class appreciated being assisted with notes and rhythms before they started the music. Ms. Burton's L-C students liked their teachers to help with rhythms, with shifting, and to provide fingerings. Lindsey, from Ms. Cherry's T-C class, said, "If I was playing a rhythm I completely forgot, I'd rather have someone tell me how it goes so I can play it better."

Give us some independence. After preliminary help, students wanted their teachers to allow them autonomy to work on their own. Jacob from Ms. Miller's class explained, "When we learn a new song, at the beginning, we need the teacher, but towards the end, we don't. We start to understand the song and I can play it." Students in every focus group agreed that they would be able to learn music best if they were allowed time to work independently in class. This would offer time for collaboration with peers, and, as an added student benefit, a teacher would be available for assistance when questions arose.

Let us play the whole piece. As a last plea, participant student musicians requested their teachers to play through the whole piece, not only small segments, so they could gain a complete picture of the music. Students expressed frustration about

rehearsing short sections of music without being offered the opportunity to play the section in context with at least a larger portion of the music. Ms. Burton's focus group was asked if they had mentioned their desire to play larger sections of the music to their teacher. Barb's emphatic response was, "It should pretty be evident!"

Student preferences. T-C and L-C students expressed similar needs with regard to learning new repertoire. Their suggestions would not be difficult to incorporate and, according to focus group students, would assist in their learning efforts. According to Brown (2008, p. 31), "Some of the best teaching strategies come from students…no one knows better how students learn than the students themselves."

Theme Five: Striking a Balance

"I Don't Think It Has to Be All or Nothing"

Throughout the study, considerable debate arose among teacher participants about L-C versus T-C classroom techniques. Though they were willing to incorporate L-C techniques for this study, teachers were apprehensive about what might occur. Considering that T-C practices have been used for over one hundred years in the music classroom, there were certainly aspects considered advantageous by ensemble teachers. Teacher participants pointed out that class pacing is generally quicker with a teacher in charge. Teachers felt they could identify and correct problems more effectively than students. Additionally, students were comfortable with the T-C classroom environment because they have little experience with any other type of instruction.

As the study progressed, however, teacher participants found integrating L-C techniques offered benefits. L-C teachers reported an improved classroom environment, while maintaining their performance standards. Students began to take initiative in

learning and appeared to pay closer attention to peer leaders over teachers. Behavior management plans became obsolete as student engagement increased. Teacher participants queried whether a balance of L-C and T-C practices might be feasible.

T-C practices prevail under performance pressure. L-C teachers tended to rely primarily on T-C practices at the time of performance evaluations and concerts. This was evident before March's LGPE. As Ms. Burton (L-C) wrote, "I felt my teaching was very teacher-centered as it was the week of LGPE. Although the students do a great job, they do not fix things at the pace or with the efficiency of the teachers." There are two reasons as to why this may have occurred. First, administrators view performance evaluation as an assessment, and, ultimately, they hold the orchestra teacher responsible for the rating. Second, this year's performance evaluation fell less than two months into the study, and L-C teachers were not yet comfortable collaborating with their students. As Ms. Burton said, "If it were another concert, it wouldn't be as big a deal to let them take a little more control, but we're just still such control freaks about LGPE."

Spring concerts offered a completely different experience for teacher and students than LGPE. There is no adjudication and the music can be chosen from any source rather than from a mandated list, therefore offering a less stressful event for participants. Teachers integrated fewer L-C techniques, however, the week prior to and week of the concert. This was reflected on their L-C checklists and in journals. Ms. Miller explained that, in her classroom, it was not due to time constraints. She felt she needed to take over instruction before concerts because she did not know how to teach her students concepts such as ensemble and balance. She felt she had to listen to the group perform and correct these issues herself. By contrast, Ms. Burton's class accomplished these aims through a

continuous process of collaboratively setting goals and critiquing performances, so that ensemble and balance were not relegated to the class periods immediately preceding performance evaluations or concerts.

Extension of L-C techniques to other classes. Following professional development, both Ms. Miller and Ms. Burton found L-C techniques unproblematic to include in their plans. Although classroom space issues kept her from being able to carry out mini-orchestras or sectionals with her sixth-grade and seventh-grade students, Ms. Miller began asking for informal critiques and incorporating peer tutoring with her other classes. She intends to continue as an L-C teacher with all of her classes next year. Ms. Burton also used L-C techniques with her seventh-grade classes. She and Ms. Cherry (T-C) plan to maintain L-C instruction with all their classes next year.

Integration of L-C and T-C techniques. Ms. Burton and I talked about whether L-C or T-C instruction had to be "all or nothing".

> Ms. Burton: I don't think it would have to be all or nothing. I think it's a good combination. Now that I look at it, we did some learner-centered things all along. I think we'll do more now and I am more conscious of it because I've noticed some positive changes in those kids. It has engaged kids I didn't necessarily see being super engaged before. I mean, they played, but they weren't engaged in other aspects of things. I think if I were in high school my top level classes would be mostly learner-centered. I think at this level though, because there's still so much knowledge acquisition, it tends to be a little more teacher-centered.
>
> Bernadette: But can you do teacher-centered in a learner-centered way?
>
> Ms. Burton: Oh yes! Oh, yes, I think you can.

At the conclusion of the study, L-C teacher participants agreed that effective L-C instruction required a seamless integration of L-C and T-C classroom practices so that teachers and students can achieve their true musical potential.

Summary

Chapter 4 presented a view into four string orchestra classrooms using observation, interview, and journal data from participants. Data were coded and categorized. From these data, five themes emerged. These qualitative findings will be converged with quantitative results. In Chapter 6, the study's questions will be discussed using converged data.

CHAPTER 5

PRESENTATION OF QUANTITATIVE FINDINGS

Introduction

Data were collected for this portion of the study through two sources: the Student Orchestra Environment Survey (SOES) and the Performance Assessment Instrument (PAI). The SOES was administered prior to the start of research, at the midpoint, and at the conclusion of the study. Descriptive and inferential analyses were conducted on all SOES data to check for change within and between L-C and T-C groups. The PAI was administered at the end of data collection and results were treated as descriptive data.

Student Participants

This study was conducted using intact eighth-grade orchestra classes at two middle schools. Research was subject to established school groupings and schedules and, therefore, groups could not be randomized. Hillside Middle School had classes of 31 and 33 students each. Lakewood Middle School had classes of 45 and 46 students each. All students in the four classes agreed to participate in the study. For purposes of data analysis, L-C and T-C classes were combined across schools. Figure 6 indicates research group assignments and teachers.

Hillside MS		Lakewood MS		Total
31 L-C Students (Miller)		45 L-C Students (Burton)		76 L-C students
33 T-C Students (Young)		46 T-C Students (Cherry)		79 T-C students

Figure 6. Student participant numbers per school.

Student Orchestra Environment Survey (SOES) Findings

SOES Reliability

The SOES was a researcher-constructed instrument (see Appendix G for a copy of the complete instrument) designed to provide insight into students' attitudes regarding various dimensions of their classroom experience. Items indicating significant Time × Group interaction effects were considered the most compelling indicators of comparisons between L-C and T-C students. The SOES was administered three times to track changes in student attitudes and between-group mean comparisons during the course of the study. To measure internal consistency of the SOES, Cronbach's alpha was calculated for each survey administration. Loewenthal (2001) designates a reliability coefficient level less than .70 to .80 as unsatisfactory. Results shown in Table 2 indicate that a satisfactory reliability level was obtained for the SOES.

Table 2

Reliability Scores for SOES

	Beginning	Midpoint	Final
Cronbach's alpha	.831	.878	.827

SOES Analysis

Students responded to SOES items using a Likert-type scale of 1 (strongly disagree) to 6 (strongly agree). Cumulative scores were not determined; rather, scores for each item were entered into the statistical program *SPSS 12.0 for Windows and SmartViewer* (Copyright © SPSS Inc., 2003). L-C (n = 76) and T-C (n = 79) scores were combined across schools to determine group means for each item. A two-way mixed-design ANOVA (2 x 3) was calculated for each item to determine whether variance was greater than expected by chance. Results were examined for effects of group, time, and Time × Group interaction on student attitudes. Results were then further analyzed to assess between-group differences during each administration of the survey and differences in results across time (a complete list of ANOVA results is available in Appendix K).

If the interaction effect for an SOES item was statistically significant ($p < .05$), simple effects post hoc tests were conducted. Dependent-samples t-tests were used to assess for significant differences over time within groups. Independent-samples t-tests were conducted to assess for differences between L-C and T-C groups. To address potential violations of the sphericity assumption in the ANOVAs, Huynh-Feldt-corrected degrees of freedom were employed in all F-tests involving main effects and interactions of repeated measures.

Significant Time × Group SOES Findings

Of the nineteen SOES items, the following two (Items 3 and 8) were found to have significant group, time, and Time × Group effects. Item 10 also revealed Time ×

Group interaction effects but did not show significance for group or time alone. As seen below, these items all related to students' perceptions of choice in their classrooms.

Item 3: *I am allowed to make choices in my orchestra class*

Item 8: *I help select the music we play in my orchestra class*

Item 10: *My teacher always chooses the daily orchestra class goals*

Ranges, means, and standard deviations for each administration of these items are presented in Table 3. Tables 4, 5, and 6 present the ANOVA and simple effects post hoc data for each.

Discussion of Items 3, 8, and 10

Item 3: I am allowed to make choices in orchestra class

Research and pedagogical literature support student choice as an important element of L-C classroom environments. Tables 3 and 4 indicate that, in this study, differences in student perceptions of opportunities for choice-making were non-significant at the outset of the study, but significant in favor of L-C students at both the midpoint and final SOES assessments. In addition, both the midpoint and final assessments for L-C students showed a significant increase over the beginning assessment. Though T-C students' perceptions of choice-making were significantly higher at the midpoint, the final assessment indicated no significant increase over the beginning assessment. The decline in means for both groups from the midpoint to the final assessment may have been influenced by teachers' tendencies (interview data) to implement more T-C strategies in preparation for their spring concerts.

Table 3

Ranges, Means, and Standard Deviations for SOES Items 3, 8, and 10

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 3						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	2.53	2.35	3.89	2.91	3.60	2.54
SD:	1.35	1.38	1.39	1.37	1.34	1.35
Item 8						
Range:	1-5	1-6	1-6	1-6	1-6	1-6
Mean:	2.06	1.94	3.97	1.97	3.61	2.26
SD:	1.16	1.32	1.40	1.28	3.61	2.26
Item 10						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.17	4.37	4.28	4.15	4.33	3.71
SD:	1.45	1.45	1.36	1.53	1.09	1.56

Table 4

ANOVA and t-test Results for SOES Item 3

ANOVA: Item 3	F	*p*	*t*	*p*
GROUP (1,153)	35.932	< .001		
TIME (2, 306)	19.502	< .001		
TIME × GROUP (2, 306)	4.936	.008		
Independent *t*-test				
GROUP				
Beginning (df = 153)			0.784	.434
Midpoint (df = 153)			4.434	< .001
Final (df = 153)			4.919	< .001
Dependent samples *t*-test				
TIME (α = .016)				
Beginning- Midpoint				
T-C(df =78)			-2.606	.011
L-C (df =75)			-5.948	< .001
Midpoint- Final				
T-C (df =78)			1.600	.114
L-C (df =75)			1.312	.194
Beginning- Final				
T-C (df =78)			-0.855	.395
L-C (df =75)			-5.076	< .001

Table 5

ANOVA and t-test Results for SOES Item 8

ANOVA: Item 8	F	*p*	*t*	*p*
GROUP (1,153)	74.434	< .001		
TIME (2,306)	27.376	< .001		
TIME × GROUP (2,306)	20.206	< .001		
Independent *t*-test				
GROUP				
Beginning (df = 153)			0.645	.520
Midpoint (df = 153)			9.265	< .001
Final (df = 153)			5.669	< .001
Dependent samples *t*-test				
TIME (α = .016)				
Beginning- Midpoint				
T-C (df =78)			-0.182	.856
L-C (df =75)			-9.104	< .001
Midpoint- Final				
T-C (df =78)			-1.493	.139
L-C (df =75)			1.653	.103
Beginning- Final				
T-C (df =78)			-1.519	.133
L-C (df =75)			-6.995	< .001

Table 6

ANOVA and t-test Results for SOES Item 10

ANOVA: Item 10	F	*p*	*t*	*p*
GROUP (1,153)	2.028	.156		
TIME (2,304)	1.300	.274		
TIME × GROUP (2,304)	3.178	.043		
Independent *t*-test				
GROUP				
Beginning (df = 153)			-0.840	.402
Midpoint (df = 153)			0.534	.594
Final (df = 153)			2.858	.005
Dependent samples *t*-test				
TIME (α = .016)				
Beginning- Midpoint				
T-C (df =78)			0.980	.330
L-C (df =75)			-0.453	.652
Midpoint- Final				
T-C (df =78)			1.800	.076
L-C (df =75)			-0.290	.773
Beginning- Final				
T-C (df =78)			2.415	.018
L-C (df =75)			-0.728	.469

Item 8: I help select the music we play in orchestra class

One L-C strategy discussed during teacher professional development sessions was involving students in the selection of repertoire within the teacher's pedagogical and musical parameters. Table 5 indicates that comparisons of student perceptions regarding involvement in music selection were non-significant at the outset of the study but were significantly different ($p < .001$) in favor of L-C students at the midpoint and final assessments. In addition, L-C students showed significantly higher means at the midpoint and final assessments over the beginning assessment for perceptions of their role in selecting music. T-C students showed no significant change in perception of helping to select music from the initial through the final assessment.

Item 10: My teacher always chooses the daily class goals

Actively engaging students in identifying learning goals and objectives was another strategy proposed as being consistent with L-C classroom environments. Item 10 reversed this issue and asked students' perceptions regarding the extent to which teachers "always" choose class goals. Table 6 indicates that initial and midpoint differences between L-C and T-C students were non-significant. Surprisingly, on the final SOES assessment, L-C students reported significantly stronger perceptions ($p < .01$) than T-C students that teachers chose class goals. T-C students showed a precipitous drop in raw mean score from the midpoint to the final assessment, suggesting that they may have felt more involved in choosing class goals by the end of the study. Nevertheless, analyses across periodic SOES assessments showed no significant differences for either group. It is possible that stronger perceptions of teacher goal-setting among L-C students on midpoint and final assessments were due to chance. However, the trend toward higher

raw means among L-C students and lower raw means among T-C students from the midpoint to the final assessment may be a reflection of L-C teachers' tendency to emphasize T-C strategies around the time of performance evaluations and public concerts that coincided with SOES assessments.

SOES Findings Significant for Both Group and Time

Three of the nineteen SOES results were found to have significant results for the main effects of group and time, although there was no significant Time × Group interaction effect. Each of these items relates to student perceptions of leadership experiences.

Item 5: *My teacher always leads the orchestra classroom experience*

Item 6: *Students help lead the orchestra classroom experience*

Item 16: *I could be in charge of organizing a small group performance*

Ranges, means, and standard deviations for each administration of these items are presented in Table 7. ANOVA results for each item are presented in Table 8.

Discussion of Items 5, 6, and 16

Item 5: My teacher always leads the orchestra classroom experience.

Consistent with the literature, L-C teachers in this study were encouraged to empower student leadership in their classrooms. Significant mean score differences on this item (Tables 7 and 8) indicate that L-C students were less prone than T-C students to view their teachers as "always" leading the class. This finding, combined with findings for Item 6 (see below), suggests that as L-C strategies became more customary, students assumed more leadership responsibilities. Though within group mean differences were significant for time, a review of raw means indicates that T-C students appeared to

increase in their perceptions of teachers as classroom leaders, while L-C students' perceptions of teachers as the only leaders decreased. Dependent samples *t*-tests confirmed the only significant shift ($p < .01$) in students' perceptions of teacher as classroom leader occurred between beginning and midpoint administrations of the SOES due to the decrease in raw means for both L-C and T-C students.

Table 7

Ranges, Means, and Standard Deviations for SOES Items 5, 6, and 16

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 5						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.59	5.01	4.25	4.59	4.34	5.06
SD:	1.03	1.17	1.30	1.42	1.03	1.09
Item 6						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.32	1.96	3.75	2.65	3.64	2.39
SD:	1.62	1.17	1.25	1.42	1.39	1.50
Item 16						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.21	2.78	3.84	3.09	3.62	2.96
SD:	1.60	1.61	1.54	1.62	1.52	1.70

Table 8

ANOVA Results for SOES Items 5, 6, and 16

ANOVA: Item 5	F	*p*
GROUP (1,153)	22.396	< .001
TIME (2,302)	4.111	.018
TIME × GROUP (2,302)	1.049	.351
ANOVA: Item 6		
GROUP (1,153)	85.792	< .001
TIME (2,306)	6.731	.001
TIME × GROUP (2,306)	0.354	.702
ANOVA: Item 16		
GROUP (1,153)	20.178	< .001
TIME (2, 306)	3.192	.042
TIME × GROUP (2,306)	0.405	.667

Item 6: Students help lead the classroom experience

This item closely relates to Item 5 in suggesting that L-C students may have assumed more leadership roles within their orchestra classrooms throughout the study. SOES results over time indicated higher perceptions of students as classroom leaders by L-C classes than by T-C classes. Both L-C and T-C students' perceptions of student leadership in the classroom were highest at the midpoint, although L-C students' perception scores were initially and remained consistently higher than T-C students' scores during the study. Dependent samples *t*-tests showed significant differences in

students' perceptions scores from the beginning to midpoint ($p < .01$) and beginning to final ($p < .01$) administrations. T-C students may have perceived more student involvement due to their (teacher-led) small group experiences during LGPE preparation, and this may have resulted in the rise in raw means from the first to the midpoint survey administration. The slight drop in raw means among L-C students from the midpoint to endpoint surveys might be explained by L-C teachers' propensity to adopt more T-C strategies during the last weeks of concert preparation.

Item 16: I could be in charge of organizing a small orchestra group performance

As a specific example of how students might demonstrate musical leadership, this item relates to the general goal of L-C environments that students feel empowered to take increasing responsibility for music leadership and learning. Dependent samples t-tests indicated a significant difference ($p < .05$) in students' perceptions only between the beginning and midpoint SOES administrations. Both L-C and T-C students' perceptions of their abilities to organize a small group strengthened during the study. L-C students' showed a mean difference increase of 0.41 over the course of the study, while T-C students' mean difference was 0.18. Orchestra teachers would expect their students to be more confident in their abilities to organize a group after a semester of instruction; however, L-C students' scores were consistently stronger and grew more than T-C students in this perception.

SOES Results for Significant Group Differences

Of the nineteen SOES items, eleven items were found to have a significant main effect for group differences. Ten of these items showed fairly predictable findings for

students exposed to L-C practices in their orchestra classroom. In contrast, findings from Item 7 were contradictory toward several other SOES results.

Item 1: *My teacher uses a variety of teaching techniques*

Item 2: *I prefer when my teacher uses different teaching techniques*

Item 4: *I prefer having choices in orchestra class*

Item 7: *I prefer it when my teacher leads the class*

Item 11: *I prefer to have input on choosing the daily orchestra class goals*

Item 13: *I am allowed to express my opinions in my orchestra class*

Item 14: *My critique of our orchestra's performance matters to my teacher*

Item 15: *I am helpful to others in my orchestra class*

Item 17: *I find my orchestra class to be interesting*

Item 18: *I like the way my teacher teaches orchestra class*

Item 19: *I can continue to perform on my instrument with or without my orchestra teacher*

Items are grouped to reflect their mutual application. Ranges, means, and standard deviations for each administration of these items are presented in Tables 9, 10, and 11. Table 12 presents ANOVA significant group main effect results for each.

Table 9

Ranges, Means, and Standard Deviations for SOES Items 1, 2, 17, and 18

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 1						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.56	3.58	4.60	3.73	4.67	3.47
SD:	1.44	1.33	1.29	1.48	1.17	1.53
Item 2						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.72	4.30	4.80	4.67	4.96	4.66
SD:	1.33	1.28	1.54	1.19	1.14	1.28
Item 17						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.66	3.37	4.14	3.52	4.05	3.53
SD:	1.49	1.58	1.52	1.53	1.32	1.53
Item 18						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.87	3.54	4.22	3.61	4.33	3.64
SD:	1.46	1.58	1.52	1.53	1.32	1.53

Table 10

Ranges, Means, and Standard Deviations for SOES Items 4, 11, 13, and 14

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 4						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	5.16	5.01	5.29	4.81	5.16	4.89
SD:	1.10	1.19	0.96	1.18	1.10	1.14
Item 11						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.35	4.01	4.34	4.04	4.37	3.82
SD:	1.34	1.39	1.37	1.31	1.45	1.46
Item 13						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.51	3.06	3.78	2.99	3.45	3.01
SD:	1.59	1.52	1.53	1.51	1.41	1.44
Item 14						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.33	3.72	4.49	4.25	4.09	3.90
SD:	1.43	1.56	1.47	1.47	1.52	1.56

Table 11

Ranges, Means, and Standard Deviations for SOES Items 15, 19, and 7

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 15						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.00	3.76	4.13	3.91	4.25	3.91
SD:	1.40	1.44	1.31	1.29	1.28	1.34
Item 19						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.30	4.19	4.66	4.02	4.63	4.19
SD:	1.43	1.64	1.35	1.46	1.46	1.58
Item 7						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	4.02	3.91	4.14	3.76	4.18	3.77
SD:	1.29	1.36	1.47	1.44	1.49	1.53

Table 12

ANOVA Significant Group Main Effect Results for SOES

ANOVA	df	F	*p*
Item 1:	GROUP (1,153)	59.858	< .001
Item 2:	GROUP (1,153)	6.162	.014
Item 17:	GROUP (1,153)	11.230	.001
Item 18:	GROUP (1,153)	16.527	< .001
Item 4:	GROUP (1,153)	7.852	.006
Item 11:	GROUP (1,153)	10.086	.002
Item 13:	GROUP (1,153)	18.496	< .001
Item 14:	GROUP (1,153)	7.007	.009
Item 15:	GROUP (1,153)	4.703	.032
Item 19:	GROUP (1,153)	8.373	.004
Item 7:	GROUP (1,153)	6.414	.012

Discussion of SOES Items with Significant Group Differences

Item 1: My teacher uses a variety of teaching techniques

Item 2: I prefer when my teacher uses different teaching techniques

Item 17: I find my orchestra class to be interesting

Item 18: I like the way my teacher teaches orchestra class

Learner-centered classrooms offer a variety of strategies adapted to meet students' learning needs. In this study, L-C teachers were encouraged to diversify their strategies from the traditional teacher-conductor model. L-C students indicated that they perceived their teachers to use a large variety of teaching techniques. Findings from Item 1 show that L-C students uniformly viewed their teachers as providing more variety than T-C students. Though differences for time were non-significant, L-C students' raw means (Table 9) show an increase in perceptions of variety as opposed to a decrease among T-C students.

Items 2, 17, and 18 each relate to students' interest and preference with regard to teacher strategies. Not surprisingly, both L-C and T-C students expressed their partiality for incorporation of a variety of teaching techniques (Item 2) in their classrooms. L-C and T-C students' raw means on Item 2 increased for each administration of the SOES, although T-C students' raw means dropped slightly (-0.01) between the midpoint and final SOES administrations. Both L-C and T-C students indicated the preference for their teachers to incorporate a variety of techniques (Item 2), but L-C students indicated that they liked the way their teacher taught more than T-C students (Item 18). L-C perception scores were significantly ($p < .001$) higher than T-C. Both L-C and T-C raw means (Item 18) increased over the course of the study, but mean differences at final administration

(0.69) were increased from mean differences at the first administration (0.33). This indicates that L-C students' may have shared a more favorable view of their teachers' techniques.

A comparison of L-C and T-C students' perceptions also suggests that L-C students were more likely to find their orchestra class to be interesting (Item 17). The slight decline in L-C means on the final administration may have been due to teachers' inclination to employ more T-C strategies during the concert preparation that coincided with the final SOES administration.

Item 4: I prefer having choices in orchestra class

Item 11: I prefer to have input on choosing the daily orchestra goals

Item 13: I am allowed to express my opinions in my orchestra class

Item 14: My critique of our orchestra's performance matters to my teacher

These items are grouped to reflect their common focus on student choice and input. Item 14 is included as an indicator of how students perceived teachers to value their input. Findings on these items suggest that, though both L-C and T-C students prefer to be offered choices and input, L-C showed stronger preferences in this regard than T-C students. Results also show L-C students' significantly higher perceptions ($p <$ .001) over T-C students of being offered the chance to express opinions in class. Perhaps predictably, related to their stronger view of the opportunity to express opinions, L-C students also reported significantly stronger perceptions ($p < .01$) than T-C that their performance critique mattered to their teachers.

Item 15: I am helpful to others in my orchestra class

L-C students' perceptions of themselves as helpful to others were significantly ($p < .05$) higher than T-C students' perceptions. Additionally, L-C students' raw means grew through each administration of the SOES. This finding suggests that when a classroom environment offers opportunities such as peer tutoring and student leadership, students are more inclined to feel that they can be helpful to their fellow students.

Item 19: I can continue to perform on my instrument with or without my orchestra teacher

In L-C classrooms, the goal is for the teacher to act as a facilitator, urging students to become self-reliant and to learn to solve problems on their own. In this study, L-C student participants indicated significantly higher ($p < .01$) perceptions than T-C student participants regarding their ability to continue performing with or without their teacher. L-C mean differences between beginning and final SOES administrations were .33, while T-C students showed no mean differences during the same time period. L-C students' increased raw means over the course of the study might suggest that integrated L-C techniques raised these students' perceptions of themselves as independent learners.

Item 7: I prefer it when my teacher leads the class

Advocates of the L-C classroom environment promote student leadership as a key characteristic (see Items 5 and 6). Item 7 of the SOES reversed this issue and asked students' perceptions regarding their preferences for teacher leadership. Surprisingly, findings indicated that L-C students expressed a preference for their teachers to lead class. T-C students, who were not offered student leader experiences, reported lower preferences than L-C students for teachers to be the classroom leaders. Although L-C

classes incorporated student leadership, findings from Item 7 indicate that L-C students preferred having teachers lead the class.

This seemingly inconsistent finding raises important questions as to how students who are accustomed to teacher-centered instruction may adjust to various aspects of a cultural shift involving greater student leadership, particularly within the short time frame represented by this study. Additional discussion of this finding in relation to qualitative data is offered in Chapter 6.

SOES Results Significant for Time

One SOES item showed a significant main effect for time only.

Item 9: *I enjoy the music we play in my orchestra class*

Table 13 shows range, mean, standard deviation, and significant ANOVA data for Item 9.

Table 13

Results for SOES Item 9

	Beginning		Midpoint		Final	
	L-C	T-C	L-C	T-C	L-C	T-C
	n=76	*n*=79	*n*=76	*n*=79	*n*=76	*n*=79
Item 9						
Range:	1-6	1-6	1-6	1-6	1-6	1-6
Mean:	3.79	3.72	4.34	3.87	4.28	4.15
SD:	1.31	1.52	1.36	1.45	1.22	1.28

ANOVA: Item 9	F	*p*
TIME (2,304)	4.902	.008

Discussion of Item 9

Item 9: I enjoy the music we play in my orchestra class

At the onset of this study, both L-C and T-C students were learning Large Group Performance Evaluation (LGPE) music that had been chosen for them by their teachers. As part of the study design, spring concert music was chosen as a collaborative effort between L-C students and their teachers. Item 9 was designed to get at the question of how much students enjoyed the repertoire regardless of the process by which it was selected.

When asked if they enjoyed the music they played in orchestra, both L-C and T-C students' means rose significantly ($p < .01$) over time. L-C and T-C raw means were very close at the beginning administration of the SOES. At the midpoint administration, L-C students were in the process of selecting spring concert music, and their raw means increased 0.55, while T-C raw means increased 0.15. At the time of the endpoint administration, both L-C and T-C students were not only performing music chosen by their teachers, but by the students themselves. Between the midpoint and final SOES administrations, L-C raw means decreased slightly (-0.06) and T-C raw means increased again (0.28). This finding offers no between-group differences despite L-C students' involvement with choosing music during the study.

Performance Assessment Instrument (PAI) Results

PAI data were used to compare final orchestra ensemble performance results between L-C and T-C classes. Adjudicators used a range of scores from 1 (superior) to 5 (poor) to grade seven indicators for each selection. Each adjudicator's total score determined a final rating. The scoring guide is shown in Table 14. Scores and ratings

have an inverse relationship, thus a lower score indicates a higher categorical rating. Final ratings were averaged across judges to determine an overall rating for each ensemble. In addition to numerical scores, the PAI offers a section for adjudicator comments. Comments were transcribed and compiled for each ensemble, then organized and compared for L-C and T-C groups.

Music repertoire was the same for L-C and T-C students at each school. Initial music choices were suggested by the L-C teachers, and then decided upon by collaboration between teacher and students. All repertoire suggestions were consistent with difficulty levels as established by the Georgia Music Educators Association's (GMEA) state required music list for annual adjudications.

Table 14

PAI Final Score Assignment

Range	Final Score	Indicator from GMEA Handbook
21 – 31	Superior	Outstanding performance
32 – 52	Excellent	A performance of distinctive quality
53 – 73	Good	Good performance, but not outstanding
74 – 94	Fair	Generally weak or uncertain performance
95 – 105	Poor	A performance needing much improvement

PAI Reliability

Four judges adjudicated the final performance of each participating class. Judges were approved members of the GMEA Orchestra Division's adjudicator list and were

previously trained on the use of this instrument. According to Wuensch (2007), when seeking the reliability of *n* judges averaged together, the Spearman-Brown correction must be utilized. The resultant statistic is called *average measure intraclass correlation* or the *inter-rater reliability coefficient*. Wuensch calls intraclass correlation or inter-rater reliability coefficient an appropriate statistical measure for a study that requires the same judges to rate each subject. Garson (n.d.) reports greater than 0.70 as an acceptable intraclass correlation. An intraclass correlation was performed to determine consistency of measure between adjudicators and was calculated at 0.939.

PAI Data

PAI results are presented by ensemble classroom. A table indicating adjudicators' scores for each musical selection and the overall score is provided for each classroom. A sampling of adjudicators' comments has also been included.

Performance Assessments of Learner-Centered Students.

Table 15 indicates PAI ratings for L-C ensembles at both schools. Hillside's mean overall L-C rating was 43 (excellent); Lakewood's was 27.5 (superior). The overall mean for L-C students was 35.25 (excellent). These data suggest that from the perspective of experienced judges, the L-C students performed at a high level in relation to expert judges' expected standards for middle school orchestras. Comments for the L-C students were typical for this age group, focusing on improvement in the areas of intonation, rhythm, dynamics, and articulation.

Table 15

Performance Assessments of Learner-Centered Students by Instructor

	Selection 1	*Selection 2*	*Selection 3*	*Overall*	*Rating*
Miller's (Hillside) PAI Scores					
Adjudicator 1	11	12	14	37	Excellent
Adjudicator 2	18	14	15	47	Excellent
Adjudicator 3	16	16	20	52	Excellent
Adjudicator 4	11	13	12	36	Excellent
Mean ratings					
m	14	13.75	15.25	43	Excellent
sd	3.56	1.71	3.40	7.79	
Burton's (Lakewood) PAI Scores					
Adjudicator 1	10	8	10	28	Superior
Adjudicator 2	10	9	10	29	Superior
Adjudicator 3	7	8	9	24	Superior
Adjudicator 4	10	9	10	29	Superior
Mean ratings					
m	9.25	8.5	9.75	27.5	Superior
sd	1.50	.58	.50	2.38	
Combined L-C Scores					
M	11.625	11.125	12.50	35.25	Excellent
sd	3.58	3.04	3.31	9.93	

Table 16

Performance Assessments of Teacher-Centered Students by Instructor

	Selection 1	*Selection 2*	*Selection 3*	*Overall*	*Rating*
Young's (Hillside) PAI Scores					
Adjudicator 1	19	15	14	48	Excellent
Adjudicator 2	18	18	19	55	Good
Adjudicator 3	16	18	23	57	Good
Adjudicator 4	14	14	13	41	Excellent
Mean ratings					
m	16.75	16.25	17.25	50.25	Excellent
sd	2.22	2.06	4.64	7.27	
Cherry's (Lakewood) PAI Scores					
Adjudicator 1	9	8	10	27	Superior
Adjudicator 2	9	8	8	25	Superior
Adjudicator 3	8	12	8	28	Superior
Adjudicator 4	11	9	11	31	Superior
Mean ratings					
m	9.25	9.25	9.25	27.75	Superior
sd	1.26	1.89	1.50	2.50	
Combined T-C Scores					
M	13.00	12.75	13.25	39	Excellent
Sd	4.34	4.17	5.34	13.85	

Performance assessments of teacher-centered students. As can be seen in Table 16, the overall mean rating for the Hillside T-C group was 50.25 (excellent). The overall mean rating for the Lakewood T-C group was 27.25 (superior). The overall categorical ratings are identical to those of the L-C groups (Table 13). Thus, both L-C and T-C groups performed at high levels in relation to expert judges' expected standards for middle school orchestras. Comments for the T-C groups were also similar to those for the L-C groups. They included suggestions for improvement in the areas of intonation, precision, and playing position.

PAI Discussion

Data indicate that overall categorical ratings within the L-C and T-C classroom groupings were identical: one rating of superior and one rating of excellent. Comparing the data by school, Lakewood achieved superior ratings for both L-C and T-C ensembles, and Hillside achieved excellent ratings for both L-C and T-C ensembles. There is no evidence to indicate that L-C ensembles were disadvantaged in performance. Given the assumed position of music performance as evidence of student learning in ensemble classrooms, these data are notable in suggesting that learner-centered classroom environments may achieve the equivalent music performance outcomes often used to justify and perpetuate teacher-centered classroom environments. In brief, the integration of democratic and constructivist principles during this study did not appear to compromise students' ability to perform at or above expected levels. The difference in ratings by school appears to be influenced by any number of variables beyond the scope of this study.

Summary

SOES Summary

Sixteen SOES items showed significant group differences between L-C and T-C student participants. SOES results suggest that L-C students perceived they had more choice and input into their class in comparison to T-C students. Additionally, L-C student participants showed significantly higher perceptions over T-C student perceptions that students helped lead class. In contrast to T-C students, L-C students reported that they felt they had the opportunity to express their opinions and that their comments mattered to their teachers. L-C students, in comparison to T-C students, indicated that their teachers used a variety of teaching techniques and that they preferred a variety of practices. This may have resulted in L-C students' higher perception scores, over T-C students, with regard to interest in orchestra and liking their teachers' classroom practices. L-C students also indicated they felt confident about organizing and performing with small groups as well as being able to continue playing their instruments with or without a teacher. In short, SOES findings suggest that students perceived L-C classrooms to offer opportunities for authentic input in orchestra class and that they valued these opportunities.

Two SOES results appeared to be disparate with regard to other findings. L-C students indicated they felt their teachers consistently chose daily classroom goals. Additionally, L-C students showed a preference for classroom leaders. Teacher and student focus groups revealed that the culture shift toward L-C environments involved transitions that were not always easy and straightforward. As teachers were opening themselves to more student involvement and input, they may have varied in the extent to

which students actually participated in choosing goals. It is also possible that students were not certain whether their input was fully influential. This seems likely, especially when considering student focus groups' perceptions that certain students "always" chose classroom goals. Students might have preferred that the teacher actually provide more leadership. Given the norm of T-C environments, adjusting to an L-C environment required a change on students' part and it is conceivable that they felt there was either too much reliance on peers, or perhaps they simply wished to benefit from the teacher's expertise. What this data disparity most likely points to is the need for balance among teacher and student leadership in a way that does not compromise the teacher's role as the "knowledgeable other."

PAI Summary

Confidence in the equivalence of ratings shown by the data is supported by high inter-rater reliability. Within each school, categorical ratings for both L-C and T-C groups were equivalent, indicating no compromise in performance quality due to implementation of L-C techniques. These findings may suggest that teachers can implement L-C practices without fear of compromising high performance standards.

Quantitative findings from this chapter will be converged with the qualitative findings presented in Chapter 4. Conclusions from the convergence of data will be presented in Chapter 6.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents convergence of data organized according to the research questions identified in Chapter 1 (pp. 10-11). I will use the data analyses discussed in Chapters 4 and 5 to draw conclusions and suggest recommendations for further research and classroom practice.

Central Question

Learning Outcomes of Learner-Centered and Teacher-Centered Classrooms

The central question for this study was: How do learning outcomes for students in a learner-centered string orchestra classroom environment compare with those of a teacher-centered string orchestra classroom environment?

Traditionally, the most widely accepted measure of learning outcomes in ensemble classes, such as orchestras, is the annual adjudicated performance. State music educators' associations generally approve judges, who function as a panel to assign individual ratings and comments using an association-approved form, and music is selected from a state-approved list of graded materials. These evaluations are a highly anticipated aspect of the school year. Because in many instances administrators, parents, and other music educators have come to associate the ratings with teacher effectiveness, music program reputation, and peer comparisons among schools, the events can be anxiety producing for both teachers and students. For purposes of this study, the term

Large Group Performance Evaluation (LGPE) has been used to describe these events. Another less formal assessment of learning outcomes occurs with public performances or concerts that ensembles present throughout the year.

When music ensemble teachers are urged to adopt a change from the traditional teacher-conductor model that focuses on performance outcomes over the process of growth, an important question is how the outcome of music performance may be affected by modifications in the learning environment. In this study, the central question of learning outcomes and the supporting question of musical growth may seem to be confounded, since an excellent outcome, as is the case in much of education today, may inappropriately be assumed to represent incremental musical growth. The problem, however, is that the adjudicated performance outcome may in fact not represent musical growth among students, but rather the ability of students to conform in rote fashion to teacher expectations for the sole purpose of producing a performance. As noted in Chapter 1, judges do not assess musical understanding or individual performance in large-group evaluations, and teachers who are caught up in a culture of large-group performance as the primary indicator of success may be thinking of outcomes more in terms of performance products than musical growth over time.

This study purposefully examined music performance learning outcomes in terms of evidence-based learning as assessed by the Performance Assessment Instrument (PAI) and musical growth in terms of an observed incremental process of acquiring understanding and skills. Though both outcomes and growth were necessarily conceptualized in relation to music content, they were interpreted to include learning that complemented and/or exceeded the evidence of standard evaluative practices such as the

large-group evaluation. To enlarge the understanding of student learning outcomes and musical growth, data from multiple sources were analyzed for evidence consistent with principles of learner-centered classrooms as described in Chapter 1, page 10, Figure 1. To conform to teachers' standing assumptions regarding the ways in which their groups are typically assessed, however, the study incorporated a performance assessment instrument (PAI) used by the state in which the study took place.

Equivalence of Large Group Performance Outcomes

Based on the findings of this study, no evidence exists to indicate any difference between L-C and T-C groups on their final performances. In particular, the incorporation of L-C strategies into classroom environments did not compromise L-C groups' final performances**,** adjudicated using the standard approach (PAI) employed annually by the school system and the state music educators' organization. Additionally, teachers' initial concerns that L-C students might perform at lower levels for LGPE evaluations were not confirmed. In reflecting on their apprehensions and the ultimate performance results, L-C teachers stated that their students were well prepared and extremely proud of both their LGPE and final performances. Ms. Miller asserted that her L-C orchestra class was better prepared for performances than her eighth-grade class the prior year, possibly due to the inclusion of L-C techniques. Teacher journal data confirmed positive interview comments in regard to performances throughout the study.

As assessed by the PAI, classroom observations, and teacher journals, the standards of performance expected of orchestras at this level were met or exceeded by both L-C and T-C groups. The categorical ratings for the combined means of both L-C groups and both T-C groups were "excellent". For both groups, judges' comments

typified those found in assessments of middle-school orchestras, including the need for improved intonation, better precision, an awareness of bow placement and distribution, and exaggerated dynamics.

Data from Lakewood offer additional perspectives on performance outcomes. Describing her T-C class in an early interview, Ms. Burton commented, "When they focus, they're incredible players…they perform at a higher level than the learner-centered class." Near the conclusion of the study, she made this observation about the Lakewood L-C class**,** "I think the learner-centered class has made a lot more performance progress this year than the teacher-centered."

Technical Skill Development

A central aspect of learning outcomes in instrumental classrooms is the development of technical proficiency to support the performance of repertoire. Teachers generally assess skill development on an ongoing basis, providing remedial measures as needed and facilitating the development of new skills as dictated by the challenges of selected repertoire. In this study, participant teachers assessed learning outcomes related to technical skills. Observations and teacher interviews indicate that L-C and T-C students were assessed individually to gauge performance abilities in upper positions, scale accuracy, and etude performance. L-C and T-C teachers confirmed that student progress on these individual benchmarks was consistent with their expectations of third-year string students.

Students also recognized their improving technical proficiency. During interviews, L-C and T-C students all noted that they had improved basic techniques that would assist them in instrumental performance after eighth-grade. They felt that the

scales they learned would provide a good basis for continuing to improve on upper positions or if they wished to learn new music. Vidhi, from Lakewood's T-C class, explained, "Basically it's like a built in clock, since what they taught us will help us go to higher levels and play more challenging pieces."

L-C students offered an additional benefit of their increased technical skills. Students attempting music outside class noticed that they had attained the requisite note skills to play music independently. Observation data note students working unaided in instrumental sections, small groups, and as peer tutors. Throughout the study, L-C teachers reported an increasing level of satisfaction with regard to student performance when students worked independently.

Learning Outcome Summary

As determined by final concert performances, both L-C and T-C students received scores consistent with high levels of middle school performance evaluation standards. A high inter-rater reliability indicates consistent agreement among expert adjudicators regarding the students' performances. L-C and T-C students felt they made significant gains in technical skills during their eighth-grade year. Teacher participants confirmed by individual performance assessments that student participants' technical skills were on par for eighth-grade orchestra students.

Supporting Questions

Supporting Question One: What evidence of musical growth occurs in a learner-centered classroom environment as compared to a teacher-centered classroom environment?

Observation, interview, and journal data have documented student musical growth throughout the study. These data sources corroborate Ms. Miller's students peer tutoring,

acting as leaders, constructing class goals, and working independently in groups. Data also document Ms. Burton's students integrating effective leadership skills, students incorporating their own lesson plans, and students monitoring other members of their instrumental section. The following themes emerged regarding comparative musical growth in L-C and T-C classes.

Awareness and Critique of Musical Performance

Throughout this study, both L-C and T-C students exhibited musical growth. T-C student musical growth, as in most ensemble programs, was measured as a learning outcome with regard to repertoire performance and technique, as routinely tested by their teachers. Though both L-C and T-C students demonstrated improved technical proficiency, as confirmed by teacher testing, observation, and teacher interview data, L-C students were no longer dependent upon their teachers to improve their performance. L-C students exhibited musical growth by selecting daily musical goals and offering increasingly effective critique of their performance. Though L-C students were reluctant to offer input at the beginning of the study, by midpoint, Ms. Burton noticed that her class was participating more fully in performance critique.

> They've gotten used to us asking again and again and if they suggest it, we'll try it. Since we try everything, they know it's safe to offer their thoughts. I've noticed that it's the quieter kids who answer, and I think maybe that's because they're the kids that do listen. So, we try it and if it doesn't work, they're the first to say, 'um, yeah…No, that didn't work.' So we try everyone's suggestion and then we ask which we like best as a class. And they'll almost always go with what I would have picked anyway.

As the study progressed, L-C teachers noted that their students began to offer increasingly effective strategies to combat performance problems they had identified. In

contrast, T-C students followed their teachers' directions, which improved their performance, but did not require them to analyze or correct mistakes on their own.

Growth of Student Musical Leaders

As Ms. Miller and Ms. Burton began integrating L-C techniques, they appointed student volunteers to lead class. Early observation data note student leaders selecting method book exercises and counting aloud to establish and maintain the class's tempo, while their teacher remained close by to assist if necessary. A later interview with Ms. Burton explained the evolution of this practice. No longer content merely to count off exercises, student leaders had created lesson plans using their concert music as a guide. As their musical diagnostic skills improved, they could offer increasingly accurate assessments of their class's performance.

Ms. Burton's L-C focus group students indicated that they preferred their teachers to provide guidelines at the start of class because teacher interruptions damaged the flow of their practice session. Rather than being dependent upon a teacher, they wanted to lead independently during sectional rehearsals. Observation data indicate improvement of student leader practices over the course of the study. At Lakewood Middle**,** when the L-C class worked in mini-orchestras, student leaders emerged spontaneously to guide their groups in practicing concert music. While several of the seven groups needed teacher intervention, most groups had student leaders who could negotiate difficult passages and offer insight into musical objectives needed for the next rehearsal.

Ms. Miller and Ms. Burton were both surprised at the students who emerged as class leaders. Ms. Miller expressed her thoughts about her student leaders.

> I expected the best players or the gifted students to be the leaders and that wasn't the case at all. It was some of the kids that I didn't even know

> were particularly interested in orchestra who have shown the most leadership…Some of the quieter kids that I never would have pegged as leaders really feel confident helping others. They just push on through and it's great.

Ms. Burton believed that L-C instruction had not only helped unexpected students to evolve into leaders, but had also encouraged more students to remain consistently involved in class.

Student Initiative

Observation and teacher data sources in this study indicate that rather than looking to their teacher for every answer, L-C students began to rely on each other for assistance. A compelling example occurred during a class when violas were having particular difficulty with a piece. After struggling for some time, asking questions, and trying to follow instructions from Ms. Miller, several students simultaneously took initiative to propose that they work in a sectional to see if they could learn their parts. Due to their collaborative efforts, the resultant performance of their music was greatly improved.

As another exhibition of musical growth, peers began to assist their classmates with music. According to SOES results, L-C student participants, significantly ($p < .05$) more than T-C student participants, perceived themselves as helpful to others in their class. Ms. Burton observed her students reminding each other to remember their pencils and music as they prepared for each class. Ms. Miller contended that peer tutoring had enhanced her class's efficiency. She could continue class while struggling students received assistance from their peers. Additionally, she reported that her peer tutors began demonstrating greater initiative during class. Ms. Miller attributed these changes to the increased musical challenges L-C instruction offered students.

Summary

Over the course of the study, L-C teachers began to report characteristics of student musical growth, including the ability to effectively diagnose and correct musical issues, and the evolution of student leaders, rather than the description of rehearsals T-C teachers provided during interviews. Ms. Cherry offered her thoughts about the Lakewood L-C class's progression of musical growth.

> I think that [using L-C techniques] has been a help for the L-C class in that they've become better listeners and better musicians because now they're listening for things that we're asking them to listen for. They know they're accountable.

This study design encouraged teachers to shift L-C students from the automaton role they had once been assigned to offering authentic musical assessment. Observation and interview data confirm L-C techniques as the catalyst for these changes. Documentation suggests that by the conclusion of the study, L-C students had become the impetus behind their class's improvement.

Question 2. What evidence of students' self-perceptions as independent music learners occurs in a learner-centered environment as compared to a teacher-centered classroom environment?

Observation and interview data support the assertion that L-C students, more than T-C students, began a trend toward greater musical independence. Additionally, the SOES included four questions that directly related to students' self-perceptions as independent music learners. Students were asked about their own responsibility toward learning, continuing performance ability, organizational skills, and classroom leader preference.

Student Autonomy

While T-C classes continued in their usual style of teachers making all musical decisions, L-C teachers encouraged student autonomy. Observation and interview data verify that L-C students were expected to practice individually, in pairs, small ensembles, and in large ensembles. L-C students created goals and practiced problem-solving techniques while working in all of these settings. L-C teachers reported increased student ownership of classroom experiences throughout the study.

Responsibility for Learning

Both SOES and focus group interview data offer insight as to whom students perceive as responsible for their learning. According to SOES results, both L-C and T-C students felt responsible for their own learning in orchestra class. There was no significant difference between groups at any of the survey administrations. Focus group interviews indicate that L-C and T-C students did not feel their teachers were solely responsible for the amount of learning accomplished in class. Ms. Young's and Ms. Cherry's T-C focus groups both specified that various members of class were not interested in improving skills, and made teaching difficult for their instructors. By contrast, L-C student focus groups reported no problems with classroom climate. L-C students further indicated that, when working independently in small groups, good student leadership kept ensembles focused on learning goals.

Ability to Continue Performing

L-C and T-C students both indicated that they could continue to perform on their instrument with or without their teacher. Neither group varied significantly over time, but SOES results of Item 19 showed L-C students reported significantly ($p < .01$) higher

perceptions over T-C students for continued performance with or without a teacher. These findings were supported during focus group interviews. Both L-C and T-C students felt that the technical skills they had garnered gave them the foundation to continue playing whether or not they proceeded with formal instruction.

Students in Ms. Young's T-C class were accustomed to a teacher-centered experience. Her focus group students said that although they would like to include independent practices in class, having no independence in class did not bother them. When Ms. Cherry's T-C students were asked if they felt comfortable playing on their own, Lindsey responded, "Me personally, I think I'd rather have someone guiding me a little. If I was playing something and came across a rhythm I didn't know, I'd rather have someone tell me how it goes." Conversely, Ms. Burton's L-C focus group said that independent practice in their classroom had lessened their dependency on teachers. They thought they could proceed effectively on their own if they had to do so.

Organizing Small Ensemble Performances

When asked on the SOES if they felt they could organize a small group performance, L-C group means were significantly higher ($p < .001$) than T-C group means. Interview data similarly suggested that L-C students perceived they could organize an ensemble performance while T-C students indicated reluctance. When Ms. Young's T-C students were asked if they could organize a small group to play, David stated, "I would not try." All of Ms. Cherry's T-C interviewees expressed discomfort in regard to organizing and performing with a small group. L-C student focus groups from both schools, however, said they were confident they could organize a small group performance.

Classroom Leader Preferences

L-C students designated a higher preference for their teacher to lead the class than T-C students. This is a perplexing result and appears contradictory to observation and interview data. SOES, observation, and interview data all corroborate that L-C students assisted with leading class. On the SOES, L-C students indicated that students led class whereas T-C students perceived that their teachers always led class. Observation data align with these student perceptions. In interviews, Ms. Miller discussed students as leaders of method book exercises, sectionals, and small ensembles, and was effusive about her students' positive reactions to this instructional modification. Ms. Burton talked about her students leading class and her focus group students commented on their enjoyment of leading. Observation data also denote that students appeared engaged and focused when their peers led class. Finally, although T-C focus groups students stated a preference for their teachers to guide them, L-C focus groups offered no such desire. Ms. Miller's group said they liked to have a teacher present for encouragement, but preferred their teacher withdraw as they felt more comfortable with the music. Ms. Burton's group strongly favored student leadership and showed resentment when teachers interrupted student leaders.

On the SOES, L-C students indicated their significantly higher preference over T-C students for being offered choice ($p < .01$) and input ($p < .01$) into class. This appears to be a contradictory finding from students who would prefer to have their teacher lead class. It is possible, therefore, that this particular SOES result may have occurred because students are habituated to a teacher-centered model in not only their music classrooms, but within the entire school culture. Another explanation may be that L-C

students liked their teachers and gave them a vote of confidence by signifying their agreement on the SOES.

Question 3. What dispositions toward learning are evident among the students of the two divergent approaches?

To influence students' learning dispositions, teachers must understand how and why students want to learn. Armed with this knowledge, teachers can structure class in a manner that engages students and encourages them to achieve at their peak level. The SOES was constructed and incorporated to track student perceptions about their environment as the study proceeded. Results from the first administration of the SOES suggest that L-C students tended to rate L-C qualities higher than T-C students even at the beginning of the study. For this reason, it may be necessary to look only for changes in perceptions within groups rather than differences between groups. In addition to SOES data, information obtained from teachers, students, and observations will be employed to provide a complete picture of the learning situations.

Students' Learning Preferences

One of this study's emergent themes was in regard to the methods through which students prefer to learn. As stated before, students want their teachers (a) to introduce them to the music by playing it for them, (b) to remain present to help learn any new concepts, (c) to allow students independence so they can practice, and (d) to let them perform the complete piece from time to time. This learning model was suggested by all four focus groups during their interview. As indicated by observation and interview data, L-C teachers modeled new music for their students and offered support to their students while giving them opportunities for independent practice. Though T-C teachers modeled

and offered support, their students were not allowed time for independent practice. By working alone, in small ensembles or in sectionals, L-C students were offered the experience of practicing music, which would satisfy learning needs as presented by student focus groups.

Variety of Teaching Techniques

SOES results, as well as focus group interviews, indicate that students from both L-C and T-C classrooms share many preferences about how they wish to learn. Though SOES results show L-C students' stronger preference, both groups exhibited preference for their teacher to use a variety of teaching techniques. Observation data illustrate a marked distinction between the variety of techniques used by L-C and T-C teachers. While L-C students worked in a variety of settings with an assortment of leaders, T-C students invariably worked in a large group with their teacher in charge.

During their interviews, Hillside L-C students said that multiple teaching methods kept class interesting, especially on block days, when class length was doubled. Angel, from the L-C group, liked the variety of techniques that Ms. Miller had used. She explained, "She wasn't the teacher that just held her hand over us and made us do things her way. She let us try different things." But Hillside's T-C group complained about the monotony of their rehearsals. Tiffany suggested, "Maybe she [Ms. Young] could just change it up a little bit because it's always the same thing, and I think that's why some of us get bored." Tiffany's comment relates to the issue of student engagement in T-C classrooms.

When asked about the variety of techniques implemented by their teacher that year, Lakewood L-C students said their teachers had tried many new things. Barb and

Tom liked having the opportunity to lead class. Cindy and John appreciated working in small ensembles. Speaking about the diversity of techniques used, Nat said, "It was more interesting and offered us more variety." Lakewood's T-C students were less enthusiastic about the effective, but repetitive, teaching methods employed in their classrooms. Vihdi explained, "The methods they use work, but we would like some fresh spice in life." Lindsey agreed, "It works, but it's tiresome."

Student Choice

Student participants also preferred to make choices and to offer input in orchestra class. As previously indicated, SOES scores showed that L-C students had a significantly higher preference for being offered choice ($p < .01$) and input ($p < .01$) than T-C students. Observation data from Ms. Miller's class verify that students offered input on rehearsal strategies. Ms. Burton's journal and interview data document students' increased involvement in musical decision-making over the course of the study. Not surprisingly, SOES results verify that all students preferred to have choice, but L-C students' perceptions that they were allowed to make choices were significantly greater ($p < .001$) than T-C students.

SOES results (Item 8) and focus group interviews both indicate that L-C students were allowed to choose music for the spring concert. L-C focus group students enthusiastically mentioned that they had chosen the music for their spring concert. Ms. Cherry's T-C focus group pointedly commented that they were not allowed to select music because of their behavior. This was not implied or intended by their teachers, but perceived by the T-C students. Though both L-C and T-C students' perceptions with regard to enjoying their orchestra music significantly increased ($p < .01$) throughout the

study, whether student choice in music selection positively impacted students' satisfaction with repertoire cannot be determined by this study's data.

Choosing Classroom Goals

Observation data from both schools report L-C teachers asking students to create goals. At times, goals selected were intended for the current class, but Ms. Burton often ended class with a mini-orchestra "de-briefing" technique that offered students an opportunity to point out problems to be addressed during the next rehearsal. According to SOES perception scores, however, as the study progressed, L-C students remained in agreement that their teachers chose the class's daily goals while T-C students' scores progressively indicated their teachers were less likely to choose class goals.

A study of Ms. Burton's daily L-C checklist shows that students chose goals approximately one out of every two rehearsals. Ms. Miller's journal indicates that her students chose goals only approximately one of four rehearsals. It is possible that without the continuity of selecting goals every day, students still felt that they had little choice over class goals. Another possible explanation was reported in Chapter 4. Ms. Miller's focus group reported that they had little choice in daily classroom goals. Further probing revealed that, because focus group students felt that several other students chose all of the goals, they had no input. Thus, even though Ms. Miller's L-C students were regularly given the chance to choose daily goals as indicated by focus group students, because students other than themselves were quicker to offer suggestions, focus group students felt they were not offered the opportunity to select goals.

Increased L-C Student Participation

Teacher journals and interviews indicate that L-C students were increasingly willing to participate in class as the study progressed. Students volunteered as leaders, offered critiques and suggestions in class, and worked as a team to accomplish musical goals. T-C teachers reported lack of engagement and discipline issues from their students.

Observation data align with T-C teacher reports. Ms. Cherry's T-C class appeared to lose focus by the middle of each observed class. At the beginning of class, students would be at the edge of their seats and responded immediately to Ms. Cherry's requests. Later in the class, students began to whisper, and relaxed their response time. Many of Ms. Young's students never seemed engaged in class. This seemed evident when watching students who did not bother to play with the class, or talked when Ms. Young was explaining a concept. Students from both T-C focus groups expressed their frustration with students who disrupted class and did not put forth effort.

In a revealing statement, Ms. Young (T-C) wrote, "The difference [between L-C and T-C classes] is extremely easy to tell by students' faces and gestures. You can tell by their attitude when coming in our doors at the beginning of class." Improved student attitudes may be a result of tailoring instruction in an attempt to meet student learning needs. While T-C students indicated little change in attitude about whether they found orchestra interesting or if they liked the way their teachers taught class, according to SOES results, L-C students achieved a more positive outlook as the study progressed.

Differences between L-C and T-C Student Disposition

This study's results, obtained from comparing SOES, journal, interview, and observation data, suggest all student participants have similar needs in regard to their learning situations. Additionally, students and teachers had the similar goal of student engagement. Participant students preferred a variety of learning situations, choice, and input regarding class goals. They also requested a specific learning model, previously discussed in Chapter 4, to follow when starting new music.

Ms. Miller, Ms. Burton, and Ms. Cherry all reported positive changes in L-C student learning dispositions over the course of the study. Teachers felt the L-C students were eager to start learning when they entered class, and they were more willing to try new techniques. This may be because L-C students felt they were offered some choices in regard to instruction or because they appreciated the variety of methods employed by their teachers. Ms. Burton suggested that L-C students felt validated because their teachers listened and amended instruction due to student recommendations.

Question 4. What dispositions toward learning are evident among the teachers of the two divergent approaches?

Teacher journals and interviews, as well as observation data, were used to understand teachers' learning dispositions. Four relevant SOES question results also provided data to compare and contrast teacher and student perceptions of teacher dispositions.

L-C Teacher Dispositions

Ms. Miller's L-C students describe her as "fun" and a "pretty good teacher" who listens to them. Her interviews and journals were positive in nature and continually

discussed her students' accomplishments. She found L-C techniques easy to incorporate into class although she indicated she "just didn't do them all the time." Analyzing Ms. Miller's journal at the conclusion of the study, I noted a relationship between her journal and daily checklist entries. On the weeks she reported fewer L-C techniques, she reported her teaching "average" or "uninspired". I asked her if she noticed the same relationship. She replied:

> Yes, I noticed the same thing. I think the L-C techniques made me feel better as a teacher. I'm not sure if it's because of the way students responded to the techniques, or if I was responding to them, but whatever it was, class was better with a little extra L-C.

Observation notes for Ms. Miller's class report students rehearsing with their sections in practice rooms, while others worked with her in the main room. Pacing was fast and students maneuvered to each location or change in assignment with a minimum of disturbance. Ms. Miller expected her students to remain on task as they moved between settings and they seemed to respond to her expectations.

Ms. Burton (L-C) reported having a difficult time letting go of her tendency toward controlling every aspect of class. Prior to the study, her pacing was very fast and she was not sure students could independently move at a speed that would satisfy her. Not only did she worry about pacing, she felt that students could not correct problems without teacher input. She wrote:

> I do think that the students did not always know how to fix what needed to be fixed in order for the concert to be at [my] desired level. For instance, they knew if things were out of tune, but they didn't necessarily know how to communicate to each other on how to repair those out of tune notes.

On my first observation, I watched Ms. Burton completely reconstruct a chorale exercise, previously used in Lakewood's T-C class, to fit the L-C class's strategies. Rather than

directing it herself, she incorporated student leaders to conduct without counting out loud. During a later interview, we discussed incorporating mini-orchestras on the very first day with new music. She thought it would be interesting to assign each mini-orchestra a new selection and allow them a week's practice time before performing in class. Throughout the study, Ms. Burton grew to show admiration and support for her students' abilities to learn independently.

As an L-C teacher, Ms. Burton moved her class at a fast pace, maintained quality of performance and kept students engaged throughout rehearsal. She created innovative L-C lesson plans from the traditional lesson plans used for the T-C class. Rather than limit her instruction to keeping students busy, Ms. Burton made it her goal to challenge students to build on current learning by moving on to new dilemmas.

T-C Teacher Dispositions

Ms. Young worked hard every day to educate her students to be musicians. Though her journals were generally upbeat, her interviews tended to sound defeatist. I asked her if she could explain the dichotomy.

> The days we had interviews were block days and I'm usually very frustrated and tired with the kids, of course, but also myself. Journals, on the other hand, I viewed as a learning tool and always tried to be positive, which is much easier in writing than talking.

Ms. Young's perception of teaching was centered on the pedagogy she should offer to her students and how she might have fallen short in her efforts.

Ms. Cherry, a contributor to both L-C and T-C classes, successfully maintained a completely different learning perspective about each approach. She found her T-C class difficult to keep engaged because of many talkative, though very talented, students. Ms. Cherry's journal entries and interviews demonstrated her frustration with a highly

talented class that refused to stay attentive to the T-C instruction. When her T-C students began to study new music for their spring concert, Ms. Cherry expressed her dissatisfaction with her class.

> They do not stay engaged throughout the whole rehearsal, especially when we're beginning new music. We're starting brand new music and it's all music that is very rhythmic based- music that includes a lot of syncopation. So, if you're working on a particular rhythm and another group is not working, it's difficult to keep them engaged. So, no, I don't always feel that they are [engaged], and that is something I always strive to improve upon, but it's challenging.

To combat this, instruction of the Lakewood T-C class rehearsal was designed to be quickly paced, with work on a small section of each piece of music rather than playing through entire selections. Rehearsals were completely teacher-centered, with students expected to remain quiet while the instructor worked with another instrumental section.

Ms. Cherry's experiences with the L-C class altered her disposition of what constitutes effective instruction. Though initially apprehensive about how L-C techniques would affect the classroom, she was impressed with the L-C students' ownership of their classroom experience. At the conclusion of the study, she reflected on her L-C and T-C experiences. She wrote, "I would be very interested to see what kind of results we could have gotten from the T-C class (with their strong personalities) by using and implementing more of the L-C ideas."

Teacher Musical Growth

Three of the teacher participants revealed aspects of professional growth during the study. Ms. Miller found that incorporating L-C techniques made her feel less anxiety about teaching, since her students began to take ownership of their performance. Playing on secondary instruments with her classes increased Ms. Miller's skills on those

instruments. She felt she had become a stronger music teacher as a result of incorporating L-C techniques. Ms. Burton said that she continued learning along with her L-C class. Not only did she see rehearsals from a new vantage point, she reported that she learned much about her students as musicians and leaders. Ms. Cherry had chosen to be a participant because of the desire to continue her professional development. She said that she had "definitely" continued learning about music with the L-C students and that she believed that L-C techniques would strengthen her students' learning abilities.

Student Perceptions of Teachers' Learning Dispositions

T-C student perceptions of teachers' learning dispositions are in league with their teachers' views. According to SOES results, T-C students perceived their musical critique mattered little and their opinions were not important. They disagreed that students helped lead class and agreed that the teacher always led class. Ms. Young and Ms. Cherry kept their class instruction teacher-centered, according to study design. SOES results and focus group interviews indicate they were successful in this venture.

L-C students' SOES results were slightly contradictory with regard to their perceptions of teachers. Though L-C students perceived that their teachers listened to their musical critiques, they indicated less certainty that their opinions mattered. L-C students' SOES perception scores show that students felt teachers always chose daily goals. Additionally, SOES scores indicated L-C students perceived that teachers always led their class. This finding directly contrasts with SOES Item 6 results, indicating that as the study progressed, L-C students perceived students as classroom leaders. As

reported previously, observation, interview, and journal data do not support SOES results with regard to teachers always leading class or choosing daily goals.

L-C students were in agreement that their teachers offered them the chance to select music and offered them choice. L-C students also indicated that their teachers integrated a variety of teaching techniques and suggested a preference for this diversity.

Teachers' Learning Dispositions Summary

The emergent theme, "I versus They", is indicative of the disparity of learning dispositions between teachers of the two divergent methods. T-C teachers remained focused on pedagogy and their ability to keep students engaged through a class period. In contrast, L-C teachers took note of students' suggestions and requests. They were concerned about student response to new techniques. Because their students remained engaged in class, L-C teachers could spend time on student learning rather than student discipline. L-C teachers allowed students to take the lead and share their expertise with other students, thus enriching the musical experience for many of their interested students.

Discussion of Findings Based on Data Convergence

Learning Outcomes

Results of this study suggest music ensemble classes can integrate L-C experiences without compromise of music performance. PAI data indicate both L-C and T-C groups performed at or above adjudicators' expected criterion for middle school orchestra students. This aligns with a study by Meece, Herman, and McCombs (2003), who reported that adolescents achieved greater mastery and higher performance goals when they felt their teachers to be integrating learner-centered instruction that included

instructional modification for students' individual needs and promotion of higher-order thinking skills.

Musical Growth

This study's results suggest learner-centered instruction may promote increased student initiative and effective student musical leadership skills. L-C teachers spent less time on the podium, thus allowing their students to become leaders. L-C student leaders took the initiative to create their own lesson plans when they led class. When L-C students needed additional assistance, they collaborated with their teachers about restructuring class to include sectionals or peer tutoring to improve performance. Anton (2002) found that the type of discourse used in L-C classrooms provided students with an opportunity for negotiation that promoted a favorable classroom environment.

At the start of the study, Ms. Burton was not convinced of her students' abilities both to identify correctly and to solve performance problems. By her final interview, however, she reported surprise at how many issues L-C students were able to resolve without teacher direction. Students from both L-C classrooms learned to identify musical errors and diagnose the problem. This result is not surprising, as research supports increased analytical abilities of students in L-C classrooms. Chao, Yang, and Chen's (2005) comparison of teaching effects between L-C and T-C classrooms demonstrated that L-C teaching strategies were shown to positively influence student problem solving abilities over T-C strategies.

Results of this research indicate that students who are offered an L-C classroom environment will demonstrate greater musical growth, as defined by this study (p. 7), than students in a T-C classroom environment. Though students in both L-C and T-C

classroom environments made performance gains as measured through increased technical skills and learning new performance repertoire, L-C students developed abilities that enabled them to create learning objectives, offer effective performance critique, and peer tutor. A potential advantage of L-C classroom environments may be an increase in student leadership abilities due to the amplified student responsibilities within this classroom atmosphere. These results are consistent with research by Brown (2003), who concluded that L-C classrooms provide an environment where students can make their own learning connections and responsibility for learning rests on the student.

Students as Independent Music Learners

The results of this study indicate that students from an L-C classroom environment are more confident in their ability to organize and perform with a small ensemble. Additionally, L-C students seem to be more inclined to continue to perform with or without a teacher. Weimer (2002) explained that L-C teachers should steer students toward autonomy and that students must accept responsibility for learning. Students have to develop intellectual maturity, learning aptitudes, and discernment to become independent learners. This study suggests that incorporating L-C techniques into an ensemble classroom could provide a more favorable environment to cultivate these qualities. Students equipped with the skills necessary to be independent music learners can continue toward becoming lifelong musicians, whether or not they are offered opportunity to continue formal music education.

Students' Learning Dispositions

A potential advantage of the L-C classroom environment, as learned through this study, may be its ability to increase student interest in the ensemble class experience.

The L-C classroom environment allowed teachers to teach new repertoire in a manner consistent with methods of instruction students favored. L-C teachers provided an expansion of ensemble groupings and a variety of instructional techniques, both of which support student learning preferences. In this study, L-C students were provided with opportunities to make choices, which aligned with L-C students' preference to be offered choices.

Providing a variety of classroom settings, instructional techniques, and student choices increases student participation, according to results of this study. According to Carreiro King (2003), student achievement and motivation are directly tied to teacher practices. In the course of this study, L-C teaching practices appear to have increased student motivation, while students still achieved the same level of performances as T-C student participants.

Teachers' Dispositions toward Learning

Results of this study indicate that teacher participants who incorporated L-C techniques strengthened their own professional development. Additionally, the classroom environment cultivated by L-C teachers enabled them to focus on student learning rather than student discipline. Study results suggest that an improved classroom atmosphere can be achieved through L-C teachers functioning as facilitators of students' learning pursuits. At the conclusion of the study, all four teacher participants said they plan to incorporate L-C techniques in the following year's instruction.

Recommendations for Further Research

This study offers a view of two divergent environments implemented in eighth-grade orchestra classrooms. This exploratory study was designed to examine the effects

of teachers integrating learner-centered techniques into their existing instruction. As is consistent with learner-centered classrooms, teachers were not required to follow strict rules of technique implementation, but were to incorporate techniques they felt would best enable them to offer quality learner-centered instruction to their students. Future research with regard to learner-centered music ensemble instruction might consider the following recommendations.

Investigation of Disparate Findings

SOES results pointed toward two pieces of discrepant data. Though L-C students expressed a preference for being offered choice and input into class, they also indicated a preference for teacher leadership in class. Although observation, interview, and journal data indicate students were offered the opportunity to create daily goals, SOES results suggest students perceived their teachers to be setting daily goals. These disparate data may require further investigation.

Methodological Recommendations

As stated in Chapter 1, learner-centered education has been widely studied in other educational fields, but music education research has offered little to teachers who wish to adapt instruction toward a more student-centered approach. A controlled study examining student independence and initiative might create findings that could be generalized to other music ensemble classroom situations. A more focused assessment of musical understanding from students in a learner-centered environment might offer insights that would assist instructors toward the development of lifelong musicians. An additional area for further study might target the issue of student engagement in a learner-centered environment.

Student Participant Age

To examine fully the results of L-C instruction on music ensemble students, a variety of student ages and grade levels should be studied. A study involving students of different performance levels would offer a rich picture of evolving L-C classroom environments.

Student Data

In describing this study, student focus group data offer a better picture of students' perceptions than SOES data. Future research in this area would be well served to include more opportunities for focus group interviews. At a minimum, student interview data should be gathered at the study's onset and conclusion. Student interview data would be a helpful resource throughout the study, because teacher participants and researchers would know how students were reacting to the classroom environment before the end of the study. Survey data are too generic to generate the type of student feedback necessary to give teacher participants a sense of student reaction to a new classroom environment.

Increased Professional Development

Teacher participants for this study were offered a limited training period in the use of L-C techniques. This study's intention was to train teacher participants in using L-C techniques in the classroom and then allow these instructors to choose when and how these would be incorporated. None had prior experience with an L-C classroom. Within a month of the study's beginning, all were incorporating L-C techniques regularly into their daily activities. As concert dates approached, however, teachers often turned to the more familiar T-C instruction.

L-C training for experienced teachers must be expanded to include strategies that effectively preserve an L-C environment throughout the year, especially during the high-stress performance evaluation preparation period. Professional development opportunities, such as pairing teachers with mentors, and the organization of reading and discussion groups around L-C research, would offer increased support for teachers attempting to modify their T-C classroom habits.

University teacher preparation needs to break the cycle of teacher-centered classroom instruction for pre-service teachers and present learner-centered principles (Hewett, 2003; Pierce & Kalkman, 2003). L-C classroom instruction is a foreign concept to many music teachers because it does not conform to traditional school music ensemble instruction. Ensemble music classrooms generally reflect T-C instruction. This study suggests that college students need to be placed in environments that challenge the teacher-conductor model. Continuing professional development, as previously discussed, will be necessary, because research indicates music teachers teach the way they were taught, not necessarily the way they were educated to teach (Gumm, 2003). Research may be needed within teacher education programs to develop and document field-based experiences and college classroom experiences that instill attitudes, knowledge, and skills for learner-centered environments.

Implications for Educators

Broadening Traditional Learning Expectations

According to Stone (2000), the priority in L-C classrooms is student engagement, not outcome. In music ensemble classrooms, the priority is often performance outcome. The quality of the concert supersedes any other educational aspirations teachers may have

for their students. Students may be relegated to the role of passive cooperators, rather than collaborators in their educational process.

L-C education does not advocate accepting compromised standards or lessened performance outcomes. Rather, L-C instruction requires teachers to consider their goals from a student perspective, and the resultant broadened view offers students a holistic approach to learning, which enriches their classroom experiences. Rather than a rote performance of teacher-chosen music literature, the L-C teacher strives for student awareness and the ability to present a musical rendering of repertoire that has been realized by a collaborative effort between teacher and students. Learning outcomes may be stated and assessed differently, and might further develop due to better understanding of student learning.

The issue of music ensemble teachers feeling pressure to conform to a T-C environment needs to be considered on a continuing basis. Much of the basis of our standards is inconsistent with student development and the authentic understanding of content, and is, rather, an easily measured, immediately evident result as occurs with a large group performance evaluation. The anxiety associated with performance-oriented learning outcomes may leave teachers feeling they must control all facets of the learning experience. This anxiety arises through administrator, colleague, and community expectations, and is perpetuated by the music education profession.

L-C strategies and attitudes can still exist, even when the teacher functions as a conductor, by continuing to solicit and incorporate musical advice from students. When music ensemble classrooms function by collaborative effort between students and teacher, the resultant learning offers an enrichment of the cultural environment for all

well beyond a traditional teacher-centered performance classroom environment. The classroom atmosphere thrives when all are participating in the necessary "brainstorming" and dialogue to reach toward an aesthetically pleasing musical experience.

Teacher Transformation

Each L-C teacher participant entered this study with preconceived ideas of democratic and constructivist education ideals. Each agreed to integrate L-C techniques into her eighth-grade classroom for the duration of the study. Each had her own fears about how this would affect LGPE outcomes and final concert preparation, since control had to be shared with students. Each incorporated L-C techniques in the manner best suited to her instructional style. Eventually, each L-C teacher discovered effective L-C techniques that she began to integrate into her other grade levels as well. At the conclusion of the study, each L-C teacher stated that she would continue to use L-C techniques because of the benefits they offered students. Though these orchestra teachers were traditionally trained in T-C orchestra instruction, each transformed instruction over the course of the study. Music ensemble teachers who remain learners can adapt instruction to include techniques that better benefit students.

Students' Learning Preferences

Student focus groups from both L-C and T-C classroom environments reiterated a favorable learning approach for new music. First, students would like to hear a performance of the piece they are to learn. Next, students would appreciate teacher guidance while beginning to play the new piece, after which they would like to be offered independent practice time to apply learned concepts to the new selection. Then, students would like to play the music straight through on occasion to allow a view of the bigger

picture of the piece. An increased understanding of students' learning preferences would help educators maintain their students' fundamental musical intrigue.

Student Engagement

In this study, teacher participants reported diverse student behaviors between L-C and T-C classrooms. L-C teachers reported a progression of learning that resulted in engaged students demonstrating ownership of their orchestra class. T-C teachers described students who were less likely to remain engaged as class continued. Integrating L-C instruction can promote student engagement, according to this study's L-C teacher participants.

Literature suggests that engaged students behave better in class (Dawson, 2002; Kohn, 1996; Miller, 2003; Wynne, 1990). McCombs and Whisler (1997) stated, "Many learner-centered teachers use no formal discipline program at all" because students are actively involved in their own instruction (p.99). L-C classroom techniques may keep students more engaged and allow educators more time to teach rather than mete out discipline consequences.

Empowering Students

L-C instruction promotes a positive student-teacher relationship, in part because students are offered choice (McCombs & Whisler, 1997). When students have control over their tasks, they are motivated and feel empowered (Kaufeldt, 1999). Empowering students can lead to an increase in student learning and development of leadership skills (Jones, 2006).

Shieh (2008) discussed the importance of promoting leadership in music ensemble classrooms in an era where our students must be trained to critically reflect on a

situation and take appropriate action. To do this, teachers must cultivate an environment that allows expression of diversity so students feel they can express their opinions. Student ensembles should be developed so students have responsibility in a group setting while learning to negotiate with others. Lastly, Shieh says, students must be provided with authentic leadership opportunities.

Wallin (2003) reported student leadership to be an intrinsic part of educational leadership. As students are principle stakeholders in the educational process, they should be provided with leadership opportunities and involved in making decisions. It seems reasonable to suggest that, as principle stakeholders in education, students should be included in opportunities for decision making and leadership. When meaningful student leadership opportunities are integrated in the classroom, students take ownership of decisions and can be held accountable for the results.

L-C techniques provide the ideal opportunities to include student leadership practices. Students can lead the entire ensemble, their section, and small ensembles while handling a variety of tasks. When a teacher allows students to assist with the decision making process, student viewpoints are considered. If a less than desirable result occurs, teacher and students can reflect and learn from the situation.

The Need for L-C Classroom Ensemble Environments

This study demonstrates that L-C techniques can be integrated into an orchestra classroom without fear that students' performance efforts will decline in quality. L-C student participants indicated they appreciated having choice in classroom goals, classroom objectives, and music selection. L-C students said they enjoyed their orchestra

class, relative to the T-C student participants, and developed skills that will likely be beneficial during subsequent musical experiences.

When most music ensemble students graduate from high school, they will not continue to perform with conducted ensembles. They will, however, be making decisions about how to enrich their lives. Their previous experiences with music will affect decisions they make. If, during their ensemble class, they remained more engaged, at the same time learning strategies that led to musical independence, it stands to reason some of these experiences may transfer into future endeavors. No matter what career they pursue, the chances are better that these students will retain an affinity for music and its place in society.

Summary

Research in other academic areas supports learner-centered instruction. Despite this, teaching practice remains resistant to change. Cuban identified causes for the lack of major change in instructional techniques in American public schools (Spring, 2004). He contended that public schools exist to serve the greater social good by encouraging uniformity and other qualities desired by bureaucratic associations. The current organization of public schools creates another impediment. Teachers are expected to use an approved curriculum, teach from a text, and keep control of their students. A third impediment is teachers' resistance to change. Teachers model their instruction from the teachers they had in school. Learner-centered teaching focuses on individual choice which opposes the demands society places on public schools. Though it appears less structured to observers, the learner-centered environment requires more work from teachers. In earlier decades, teachers who believed in learner-centered education changed

their instruction, but large numbers of teachers sustained traditional methods. School administrators, argued Cuban, did not support the change.

As discussed in the second chapter, L-C initiatives began as early as the eighteenth century. Though these concepts are revisited throughout education literature every decade, a complete shift to these philosophies has never occurred. Perhaps Cuban's theories as to why L-C classrooms have not been able to break the barrier and become the norm are correct. In spite of published literature extolling benefits of L-C classrooms on education, this manner of instruction has not become mainstream in academic classrooms.

Though literature on L-C instruction is plentiful, there is a limited body of literature regarding L-C instruction in the music ensemble classroom. Until many studies that support the use of L-C instruction for classroom music ensembles have been carried out, there is no incentive for music teachers to change how they have traditionally taught their classes. Obviously, there are ensembles that have successfully learned how to create beautiful music in a T-C classroom environment. T-C instruction has been incorporated for these many years because educators and students found it an effective method of instruction. This question must be asked, however: Will this type of transmission instruction be enough to serve students in the future considering our rapidly changing world?

Pink (2006) described our current society as moving from the Information Age into the Conceptual Age. For our students to survive as they move into the workforce, analytical skills need to be augmented with an ability to synthesize. Students must be equipped to develop a broad view of a given situation, combined with the capability to

cast incongruent pictures into a new entirety. To thrive in today's society, students must be lifelong learners who have an integrated view of knowledge (Jarvis, Holford, & Griffin, 2003).

Teachers who follow a "factory model" of instruction rob students of their chance to lead, solve problems, and think creatively. Rydeen (2008) opined that today's techno-savvy students require a classroom that offers them flexibility. According to Darling-Hammond, Griffin, and Wise (1992), L-C instruction requires reflection and analytical thinking. They further said that an L-C classroom allows students to build a base of knowledge and organize resources they can continue to draw upon. If our role as educators is to nurture lifelong learners, students must have an integrated view of knowledge, rather than one that remains fixed within our discipline area. It is the responsibility of today's music educators to seek out and incorporate the educational practices that best fit students' learning needs.

References

Allsup, R. E. (2003). Mutual learning and democratic action in instrumental music education. *Journal of Research in Music Education, 51*(1), 24-37.

Anderson, J. L., Levis-Fitzgerald, M. R., & Rhoads, R. A. (2003). Democratic learning and global citizenship: The contribution of one-unit seminars. *The Journal of General Education, 52*(2), 84-107.

Anton, M. (2002). The discourse of a learner-centered classroom: Sociocultural perspectives on teacher-learner interaction in the second-language classroom. *The Modern Language Journal, 83*(3), 303-318.

Arnstine, D. (1995). *Democracy and the arts of schooling*. Albany, NY: SUNY Press.

Atherton, J. S. (2005). Learning and teaching: Constructivism in learning. Retrieved July 28, 2007 from Learning and Teaching Web Site: http://www.learningandteaching.info/learning/constructivism.htm

Barr, R., McCabe, R., & Sifferlen, N. (2001). Defining and teaching learning outcomes. Retrieved September 20, 2008 from League for Innovation Web Site: http://www.league.org/league/projects/lcp/lcp3/Learning_Outcomes.htm

Bencze, J. L. (2000). Democratic constructivist science education: Enabling egalitarian literacy and self-actualization. *Journal of Curriculum Studies, 32*(6), 847-865.

Bergee, M. J., & Cecconi-Roberts, L. (2002). The effects of small-group peer interaction on self-evaluation of music performance. *Journal of Research in Music Education, 50*(3), 256-268.

Beswick, K. (2005). The beliefs/practice connection in broadly defined contexts. *Mathematics Education Research Journal, 17*(2), 39-68.

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education, 84*(6), 740-756.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (1999). The design of learning environments. In *How people learn: Brain, mind, experience, and school* (pp. 117-142). Committee on Developments in the Science of Learning; National Research Council. Washington, D.C.: National Academy Press.

Brooks, J. G., & Brooks, M. G. (1999). *In search of understanding: The case for constructivist classrooms*. Upper Saddle River, NJ: Columbus, Ohio.

Brown, J. K. (2008). Student-centered instruction: Involving students in their own education. *Music Educators Journal, 94*(5), 30-35.

Brown, K. L. (2003). From teacher-centered to learner-centered curriculum: Improving learning in diverse classrooms. *Education, 124*(1), 49-54.

Bruner, J. (1983). *Child's talk: Learning to use languages*. London: Oxford University Press.

Carreiro King, I. (2003). Examining middle school inclusion classrooms through the lens of learner-centered principles. *Theory into Practice, 42*(2), 151-158.

Chall, J. S. (2000). *The academic achievement challenge: What really works in the classroom?* New York: Guilford Publications.

Chao, C. Y., Yang, P. C., & Chen, W. C. (2005). A study on the learner-centred evaluation strategy. *World Transactions on Engineering and Technology Education, 4*(2), 159-164.

Chapman, D. G., Toolsie-Worsnup, S., & Dyck, L. S. (2006). *An analysis of the effects of student leadership in schools*. Unpublished master's thesis, University of British Columbia, British Columbia, Canada.

Chen, I. (1998). Social constructivist theories. In *An Electronic Textbook on Instructional Technology.* Retrieved September 23, 2007, from http://viking.coe.uh.edu/~ichen/ebook/et-it/social.htm#instruction

Chicoine, D. (2004). Ignoring the obvious: A constructivist critique of a traditional teacher education program. *Educational Studies Journal of the American Educational Studies Association, 36*(3), 245-263.

Cornelius- White, J. (2007). Learner-centered teacher student relationships are effective: A meta-analysis. *Review of educational research, 77*(1), 113-143.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.

Curry, C., Cohen, L., & Lightbody, N. (2006). Universal design in science learning. *The Science Teacher, 37*(3). 32- 37.

Cushman, K. (1994). Empowering schools: Essential schools' missing link. Retrieved April 1, 2007 from CES National Web Site: http://www.essentialschools.org/cs/resources/view/ces_res/86

Daniels, D. H., & Perry, K. E. (2003). "Learner-centered" according to children. *Theory into Practice, 42*(2), 102-108.

Darling-Hammond, L., Griffin, G. A., & Wise, A. S. (1992). *Excellence in teacher education: Helping teachers develop learner-centered schools.* In Robert McClure (Series Ed.), *NEA school restructuring series*. Washington, D. C.: National Education Association.

Dawson, K. (2002). Best discipline is good curriculum. *Rethinking Schools Online, 17*(1). Retrieved August 9, 2008, from http://www.rethinkingschools.org/archive/17_01/Best171.shtml

Delaney, J. G. (1999). *What are learner-centered schools?* Retrieved November 24, 2006, from Memorial University of Newfoundland, Faculty Web Site: http://www.mun.ca/educ/faculty/mwatch/vol1/delaney2.html

DeRoma, V., & Nida, S. (2004). A focus on "hands-on", learner-centered technology at The Citadel. *TechTrends, 48*(5), 37-41.

Dewey, J. (1938). *Experience and education*. New York: Collier Books.

Dewey, J. (1959). The child and the curriculum. In M. S. Dworkin (Ed.), *Dewey on education: Selections.* (pp. 91-111). New York: Teachers College Press.

Dewey, J. (1997). *Democracy and education*. New York: The Free Press. (Original work published 1916)

Donovan, M. S., Bransford, J. D., & Pellegrino, J. (1999). *How people learn: Bridging research and practice*. Committee on Learning Research and Educational Practice; Commission on Behavioral and Social Sciences and Education. Washington D.C.: National Research Council National Academy Press.

Dornyei, Z., & Murphey, T. (2003). The cohesive group: Relationships and achievement. In *Group Dynamics in the Language Classroom* (pp. 60-74). Cambridge: Cambridge University Press.

Duhon-Haynes, G. M. (1996, March). *Student empowerment: Definition, implications and strategies for implementation*. Paper presented at the Third World Symposium, Grambling, LA.

Emes, C., & Cleveland-Innes, M. (2003). A journey toward learner-centered curriculum. *Canadian Journal of Higher Education, 33*(3), 47-69. Retrieved July 1, 2007, from the Educational Abstracts database.

Figg, C., & Burson, J. (2005). Across the curriculum with handheld computers. *Computers in the Schools, 22*(3/4), 131-144.

Finney, J. (2003). From resentment to enchantment: What a class of thirteen year olds and their music teacher tell us about a musical education. *International Journal of Education and the Arts, 4*(6), 1-23.

Freer, P.K. (2006). Adapt, build, and challenge: Three keys to an effective choral rehearsal for young adolescents. *Choral Journal, 47*(5), 48-55.

Garson, G. D. (n.d.). *Inter-rater reliability*. In *Statnotes: Topics in multivariate analysis*. Retrieved October 4, 2008, from http://www2.chass.ncsu.edu/garson/pa765/statnote.htm

Georgia Department of Education. (n.d.). *2006-2007 GOSA report card comparisons*. Retrieved June 11, 2008, from http://www.doe.k12.ga.us/ReportingFW.aspx?PageReq=102&CountyId=667&T=1&FY=2007

Goodlad, J. I. (2004). *A place called school*. New York: McGraw-Hill. (Original work published 1984)

Green, L. (2002). *How popular musicians learn: A way ahead for music education*. Bodmin, Cornwall: MPG Books Ltd.

Gumm, A. (2003). *Music teaching style: Moving beyond tradition*. Galesville, MD: Meredith Music

Hamann, D. L., Mills, C., Bell, J., Daugherty, E., & Koozer, R. (1990). Classroom environments as related to contest ratings among high school performing ensembles. *Journal of Research in Music Education, 38*(3), 215-224.

Hancock, D. R., Bray, M., & Nason, S. A. (2002). Influencing university students' achievement and motivation in a technology course. *Journal of Educational Research, 95*(6), 365-372.

Hannafin, R. D. (2004). Achievement differences in structured versus unstructured instructional geometry programs. *Educational Technology Research and Development, 52*(1), 19-32.

Harris, K. R., & Alexander, P. A. (1998). Integrated, constructivist education: Challenge and reality. *Educational Psychology Review, 10*(2), 115-127.

Harris, R. L. (2000). Batting 1000: Questioning techniques in student-centered classrooms. *Clearing House, 74*(1), 25-26.

Henson, K. T. (2003). Foundations for learner-centered education: A knowledge base. *Education, 124*(1), 5-16.

Hewett, S. M. (2003). Learner-centered teacher preparation: A mastery of skills. *Education, 124*(1), 24- 30.

Hyman, I. A., & Snook, P. A. (2000). Dangerous schools and what you can do about them. *Phi Delta Kappan, 81*(7), 489-498, 500-501.

Jarvis, P., Holford, J., & Griffin, C. (2003). The theory and practice of learning (2nd ed.). London: Kogan Page Ltd.

Jones, B. F., Palincsar,, A. S., Ogle, D. S., & Carr, E. G. (1987). *Strategic teaching and learning: Cognitive instruction in the content areas*. Alexandria, VA: Association for Supervision and Curriculum Development.

Jones, M. (2006). Teaching self-determination. *Teaching Exceptional Children 39*(1), 12-17.

Katz, L. G. (1993). Dispositions as educational goals. *ERIC Digest*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education. ED363454.

Kaufeldt, M. (1999). Student choice in a learner-centered classroom: Orchestrating opportunities. In *Begin with the brain: Orchestrating the learner-centered classroom* (pp. 141-169). Chicago: Zephyr Press.

Kennedy, M. (2003). "A home away from home": The world of the high school music classroom. *Journal of Research in Music Education, 51*(3), 190-205.

Kohn, A. (1996). *Beyond discipline: From compliance to community*. Alexandria, VA: Association for Supervision and Curriculum Development

Kohn, A. (1999). *The schools our children deserve: Moving beyond traditional classrooms and "tougher standards"*. New York: Houghton Mifflin.

Kubow, P.K., & Kinney, M.B. (2000). Creating democracy in the middle school classroom: Insights from Hungary. *The Social Studies, 91*(6), 265-271.

Landrum, E. R. (1999). Fifty-plus years as a student-centered teacher: An interview with Wilbert J. McKeachie. *Teaching of Psychology, 26*(2), 142-146.

Lee, S. (2006). The learner-centered paradigm of instruction and training. *TechTrends, 50*(2), 21-23.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park: Sage Publications.

Loewenthal, K. M. (2001). *An introduction to psychological tests and scales* (2nd ed.). Philadelphia: Taylor & Francis Inc.

Maroufi, C. (1989). A study of student attitude toward traditional and generative models of instruction. *Adolescence, 24*(93), 65-72.

McCombs, B. L. (2003). A framework for the redesign of K-12 education in the context of current educational reform. *Theory into Practice, 42*(2), 93-101.

McCombs, B. L., & Whisler, J. S. (1997). *The learner centered classroom and school: Strategies for increasing student motivation and achievement*. San Francisco: Jossey- Bass.

Meece, J. L. (2003). Applying learner-centered principles to middle school education. *Theory into Practice, 42*(2). 109-116.

Meece, J. L., Herman, P., & McCombs, B. L. (2003). Relations of learner-centered teaching practices to adolescents' achievement goals. *International Journal of Educational Research, 39*(4-5), 457-475.

Miller, B. M. (2003). *Critical hours: Afterschool programs and educational success.* Quincy, MA: Nellie Mae Education Foundation.

Miller, S. (2005). Students as agents of classroom change: The power of cultivating positive expectations. *Journal of Adolescent and Adult Literacy, 48*(7), 540-546.

Movitz, A. P., & Holmes, K. P. (2007). Finding center: How learning centers evolved in a secondary, student-centered classroom. *English Journal, 96*(3), 68-73.

Mullins. S. L. (1997, November). *Images of democratic educators.* Paper presented at the National Council for the Social Studies 77th Annual Conference, Cincinnati, Ohio.

Narum, J. L. (2004). *What lasts: An essay: A learner-centered environment*. Retrieved November 10, 2006, from Project Kaleidoscope Web site: http://www.pkal.org/documents/narum_a-learner-centered-environment.pdf

Notar, C. E., Wilson, J. D., & Montgomery, M. K. (2005). A distance learning model for teaching higher order thinking. *College Student Journal, 39*(1), 17-25.

Obenchain, K. M., & Abernathy, T. V. (2003). Twenty ways to build community and empower students. *Intervention in School and Clinic, 39*(1), 55-60.

Olsen, D. G. (2000). Constructivist principles of learning and teaching methods. *Education, 120*(2), 347-355.

Opdenakker, M. C., & Van Damme, J. (2006). Teacher characteristics and teaching styles as effectiveness and enhancing factors of classroom practice. *Teaching and Teacher Education, 22*(1), 1-21.

Paris, C., & Combs, B. (2000, April). *Teachers' perspectives on what it means to be learner-centered*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, Lousiana.

Perrone, V. (1994). How to engage students in learning. *Educational Leadership, 51*(5), 11-13.

Pierce, J. W., & Kalkman, D. L. (2003). Applying learner-centered principles in teacher education. *Theory into Practice, 42*(2), 127- 132.

Pillay, H. (2002). Understanding learner-centeredness: Does it consider the diverse needs of individuals? *Studies in Continuing Education, 24*(1), 93-102.

Pink, D. H. (2006). *A whole new mind: Why right-brainers will rule the future*. New York: Riverhead Books.

Price, D. (2005). *Musical futures: An emerging vision*. Retrieved September 10, 2006 from The Paul Hamlyn Foundation Web site: http://www.musicalfutures.org.uk/pamphletdownload/An%20Emerging%20Vision/An_emerging_Vision_Bw.pdf

Rallis, S. F. (1996). Creating learner-centered schools: Dreams and practices. *Educational Horizons, 75*(3), 20-26.

Reed, T. A. (2001). *Student leaders in the classroom: A study of Virginia Tech student leaders and their accounts of curricular and co-curricular leadership*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University.

Reeves, L. (1997). Minimizing writing apprehension in the learner-centered classroom. *English Journal, 86*(6), 38-45.

Richardson, V. (1997). Constructivist teaching and teacher education: Theory and practice. In V. Richardson (Ed.), *Constructivist teacher education: Building a world of new understandings.* (pp. 3-14). London: Falmer Press.

Russell, J. A. (2006). Building curriculum-based concerts. *Music Educators Journal, 92*(3), 34-39.

Rydeen, J. E. (2008). Learning from the past. *American School & University, 80*(9), 58.

Sanchez-Contreras, L., Gomez, R. M., Ramos, J., Flores, B., & Knaust, H. (2002). Developing a learner centered environment to meet the needs of a growing urban commuter student population. *Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition*. Session 2793, 1-9., Nashville, TN.

Sarasin, L. C. (2006). *Learning style perspectives: Impact in the classroom* (3rd ed.). Madison, WI: Atwood Publishing.

Schuh, K. L. (2003). Knowledge construction in the learner-centered classroom. *Journal of Educational Psychology, 95*(2), 426-442.

Schuh, K. L. (2004). Learner centered principles in teacher centered practices. *Teaching and Teacher Education*, *20*(8), 833-846.

Schutz, A. (2001) John Dewey's conundrum: Can democratic schools empower? *Teachers College Record, 103*(2), 267-302.

Schensul, S. L., Schensul, J. J., & LeCompte, M. D. (1999). Exploratory or open-ended observation. In *Essential ethnographic methods: Observations, interviews, and questionnaires*. (Book 2 in Ethnographer's Toolkit, pp. 91-120). Walnut Creek, CA: AltaMira Press.

Shieh, E. (2008). Developing leadership in the ensemble classroom. *Music Educators Journal, 94*(4), 46-51.

Shively, J. (2004). In the face of tradition: Questioning the roles of conductors and ensemble members in school bands, choirs and orchestras. In L. R. Bartel (Ed.),

Questioning the music education paradigm. (pp. 179-190). Waterloo, Ontario: Canadian Educators' Association.

Sizer, T. R. (1999). No two are quite alike. *Educational Leadership, 57*(1), 6-11.

Short, P. M., & Greer, J. T. (1993, October). *Empowering students: Variables impacting the effort*. Paper presented at the annual meeting of the University Council for Educational Administration, Houston, Texas.

Simpson, D. J., Jackson, M. J. B., & Aycock, J. C. (2005). *John Dewey and the art of teaching*. Thousand Oaks, CA: Sage Publications.

Smialek, T., & Boburka, R. R. (2006). The effect of cooperative listening exercises on the critical listening skills of college music-appreciation students. *Journal of Research in Music Education, 54*(1), 57-72.

Spring, J. (2004). Textbooks, curriculum, internet e-learning, and instruction. In *American Education* (11th ed.). (pp. 243-274). New York: McGraw-Hill Higher Education.

Stone, J. E. (2000). Aligning teacher training with public policy. *The State Education Standard, 1*(1), 35-38.

Tsai, C. C. (2007). Teachers' scientific epistemological views: The coherence with instruction and students' views. *Science Education, 91*(2), 222-243.

Turner, M. E. (1999). Child-centered learning and music programs. *Music Educators Journal, 86*(1), 30-33, 51.

van Driel, J. H., Bulte, A. M. W., & Verloop, N. (2005). The conceptions of chemistry teachers about teaching and learning in the context of a curriculum innovation. International *Journal of Science Education, 27*(3), 303-322.

Vega, Q. C., & Tayler, M. R. (2005). Incorporating course content while fostering a more learner-centered environment. *College Teaching, 53*(2), 83-86.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Wallin, D. (2003). Student leadership and democratic schools. *NASSP Bulletin, 87*(636), 55-78.

Warde, W. F. (1960). John Dewey's theories of education (D. Gaido, Ed. & Trans.) *International Socialist Review, 21(*1). In *George Novack Internet Archive 2005.* Retrieved October 11, 2007 from http://www.marxists.org/archive/novack/works/1960/x03.htm

Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice*. San Francisco: Jossey-Bass.

Wiggins, J. H. (2001). *Teaching for musical understanding*. New York: McGraw-Hill.

Woodford, P. G. (2005). *Democracy and music education: Liberalism, ethics and the politics of practice*. Bloomington, IN: Indiana University Press.

Wuensch, K. L. (2007). *Inter-rater agreement*. Retrieved July 3, 2008 from http://core.ecu.edu/psyc/wuenschk/docs30/InterRater.doc

Wynne, E. A. (1990). Improving pupil discipline and character. In O.C. Moles (Ed.), *Student discipline strategies: Research and practice* (pp.162-192). Albany, NY: SUNY Press.

APPENDIXES

APPENDIX A

Teacher Training Materials

Learner-Centered Classroom Teacher Training

Since their inception, instrumental classes in American schools have emphasized preparing public performances. This tradition has arisen through professional, administrative, community, and parental expectations (Russell, 2006). Instrumental classes have been organized as performing ensembles, and teachers have tended to imitate the transmission example by which they were taught, which is based on a rehearsal rather than a learning model (Jones, Palincsar, Ogle, & Carr, 1987). The persistence of this approach makes it challenging to steer ensemble classes toward more learner-centered music education (Shively, 2004). Democratic and constructivist learning theories have influenced learning environments for decades; nevertheless, instrumental music classrooms have remained largely static in their teacher-centered orientation.

Continuing research on teaching and learning clearly argues the benefits of learner-centered initiatives, but research on ensembles often does not reflect this perspective. Classroom ensemble directors choosing the teacher-centered culture that also pervades most music education research are supported by other music professionals, administrators, and the community because of accepted tradition. Without research comparing a teacher-centered culture to a learner-centered ensemble classroom environment, music educators may not be aware of the benefits of alternative learning environments. The need for research in this area is clear. To continue the status quo will not allow ensemble students the educational experience they deserve, one that might strengthen students' options for independent musical growth past formal education opportunities.

The Purpose of the Study

The purpose of this study is to discover and to analyze whether and in what ways a learner-centered instrumental music education environment may nurture musical growth and independence, and how the outcomes associated with such an environment compare with those of a more teacher-centered classroom culture. Additionally, this study will address how each approach (learner-centered and teacher-

centered) is perceived by adolescents relative to their musical growth and interests, and whether each supports adolescents' fundamental intrigue with music.

Definitions

The following definitions will be used in this study:

Teacher-centered classroom- Instruction that takes place in a highly structured environment where the teacher organizes the learning tasks, establishes the classroom objectives, and presents materials to support only these, and creates the timetable and methods to achieve these learning tasks (Hancock, Bray, & Nason, 2002)

Learner-centered classroom- Instruction that takes place in a less structured environment that allows students to influence the time and character of instruction, their approach to learning tasks, and to participate in an open exchange of ideas (Hancock, Bray, & Nason, 2002). For purposes of this study, the learner-centered environment will include techniques consistent with democratic and constructivist learning principles.

Performance-based ensemble classes- For the purposes of this project, performance-based ensemble and instrumental classrooms will be considered those that operate with the goal of a music ensemble performance as is consistent with a band or orchestra ensemble classroom.

Disposition- Katz (1993) defines disposition as the inclination to demonstrate repeatedly, knowingly, and willingly a model of behavior aimed at a broader goal. For purposes of this study, the term "disposition" covers a range of skills and focuses on educational development.

Classroom Environments

This study will compare the environments and learning outcomes of two divergent middle school string orchestra instructional settings: a teacher-centered classroom and a learner-centered classroom. Students in both types of classrooms will share the same performance dates with the same music; the learning process used to arrive at the performance outcomes, however, will be markedly different. The teacher-centered paradigm will have a teacher-conductor who determines the daily objectives, instructs the students on what, how, where, and when to play, and detects and corrects performance errors while keeping students quiet unless performing or asking questions. The learner-centered classroom environment will offer students active learning, choice, leadership and problem-solving opportunities, as well as the chance to work toward their peak developmental level by integrating principles from democratic and constructivist learning theories. Additionally, the teacher in this class will be considered a guide, a coach, and a learner.

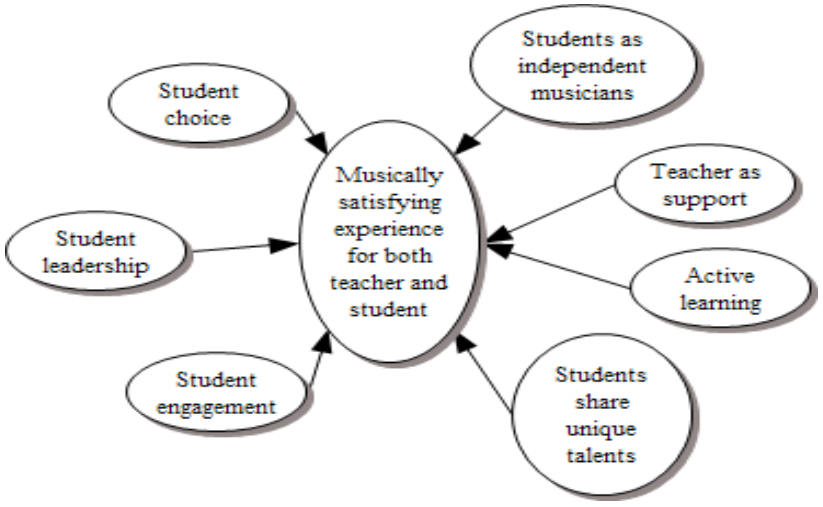
Democratic classroom approaches, based on the work of Dewey, encourage an educated society using progressive educational practices that allow for alternative perspectives (Dewey, 1916/1997). Dewey's desire was ultimately to achieve a community-minded and democratic adult society, and his quest for instruction that offers

students a chance for interaction, reflection, and practical experience is strongly supported by current educational theorists.

Social constructivism, which originated with Lev Vygotsky and has commonalities with the work of Jerome Bruner, is concerned with the way the learner develops meanings and understandings in a social context. Examining each learner as an individual with unique needs and backgrounds, social constructivism sees the learner as complex and multidimensional. Not only does social constructivism consider the learner's uniqueness and complexity, but it actually encourages, utilizes and rewards these characteristics as an integral part of learning process (Atherton, 2005). The constructivist classroom seeks to optimize student learning experiences by guiding students past their actual level of development toward their potential level of development, an area of immediate potential known as the zone of proximal development (Vygotsky, 1978).

Democratic classroom practices support student choice, reflective thought, group collaboration, and development of individual responsibilities. Constructivist principles within the learner-centered environment encourage student critique, student leadership, and independent learning toward musical understanding to provide an optimal classroom experience. Both democratic and constructivist principles promote active learning, relevance of topic, and problem solving opportunities for students. **It is the careful combination of democratic and constructivist principles that will lead to a classroom that offers students a true learner-centered experience.** The learner-centered model for this study will draw on all of these principles.

* For the integrity of this study, each T-C teacher will maintain current T-C practices through the data collection period. I will discuss the importance of this with each T-C teacher prior to the beginning of the data collection period and will evaluate this continuity through observations.



Study Time Frame

Observations, interviews and perception surveys will be collected until the adjudicated concerts take place in May, 2008. During the five-month data collection period, teachers of the L-C classrooms will complete a daily checklist that indicates the learner-centered activities used during that class period. The checklist will be a tool to assist in checking the L-C classrooms' fidelity of implementation. These checklists are a reminder of possible activities for the teacher and will allow a view into what types of activities were used on non-observation days. Each week, the teachers of both L-C and T-C classrooms will complete a journal page indicating their insights regarding both class progress and classroom atmosphere. On a bi-weekly basis, all four classrooms will be observed, and I will conduct semi-structured interviews with their teachers. Every month, students will complete a survey indicating their perceptions of the class atmosphere.

At the end of the data collection period, all four string orchestra classes will perform three selections for assessment. The music selection procedure will be the same for School A and School B. Together the L-C and T-C teachers at each school will agree on six acceptable selections for this program. Comparable skill and musical requirements are established by each piece's inclusion on the Georgia Music Educators Association (GMEA) Grade Three String Orchestra List. For the L-C classes, teachers will allow their students to choose three concert selections from the six acceptable choices presented. For the T-C classes, teachers will offer no choice in music selection. Both classes at each school will play the same three selections chosen by the L-C group. After the performances, the final data source, student focus groups, will be conducted at both schools.

APPENDIX B

Participant Consent Forms

Georgia State University Department of Music
Student Assent Form

Title: The Learning Outcomes of Two Middle School String Orchestra Classroom Environments

Principal Investigator: Primary Investigator (PI): Dr. David Myers
Student PI: Bernadette Scruggs

I. Purpose:

You are invited to take part in a study. We are interested in your thoughts about your orchestra class. You are invited to be in the study because you are in the eighth-grade orchestra at your school. This study will be during orchestra class and will take no time outside of school. If you choose not to be in the study, you can still be in orchestra class as usual. This study will take place until the end of the school year.

II. Procedures:

This study will take place only during orchestra class. Someone will observe your class every other week. Each month, you will take a survey that asks your opinions about your orchestra class. The surveys should take you less than five minutes to finish. You may also be asked to be in a group interview. At the end of the study, your orchestra class will perform a concert in your classroom in front of three orchestra judges.

III. Risks:

In this study, you will not have any more risks than in a regular school day.

IV. Benefits:

You could help orchestra teachers learn by sharing what you think about your orchestra class.

V. Voluntary Participation and Withdrawal:

You do not have to be in this study. If you want to be in the study, you may drop out at any time. You may also skip survey questions or choose not to be interviewed.

VI. Confidentiality:

You will never be identified in the study. The surveys will not ask for your name. Your school and teacher will be assigned code names.

VII. Contact Persons:

If you have questions about the study, you can contact Bernadette Scruggs at bscruggs@student.gsu.edu. If you have concerns about your participation in this study, you may discuss them with your orchestra teacher or your parents. They can help you contact the appropriate people.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this form to keep. If you are willing be a part of this research, please sign below.

_____	_____
Name (please print)	Date
_____	_____
Signature	Date
_____	_____
Student PI	Date

Georgia State University
School of Music
Informed Consent

Title: The Learning Outcomes of Two Middle School String Orchestra Classroom Environments

Principal Investigator: PI: Dr. David Myers
Student PI: Bernadette Scruggs

I. Purpose:

Your child is invited to participate in a study. The purpose of the research is to study the classroom environment of his/her middle school orchestra. Your child is invited to join because he/she is a member of the eighth-grade orchestra. This study will take place during orchestra class and will require no extra time from your child. Your child can be in orchestra class and choose not to be a part of this study. This study will be carried out from January, 2008 through May, 2008.

II. Procedures:

All research will be in your child's orchestra classroom. The researcher will observe your child's class every other week. Students will complete one survey each month about their opinion of the classroom atmosphere. The surveys will take less than five minutes to complete. At the end of the study, each orchestra class will perform a concert in their classroom for three orchestra judges.

III. Risks:

In this study, your child will not have any more risks than in a normal day of life.

IV. Benefits:

This study will compare teaching techniques. Your child's orchestra experience may be improved by being in the study.

V. Voluntary Participation and Withdrawal:

Your child does not have to be included in this study. If you decide to let your child be included in the study, your child has the right to drop out of the study at any time. Your child may skip survey questions or stop participating at any time.

VI. Confidentiality:

No student will be identified in this study. The surveys will not ask for student names. Each school and teacher will be assigned a code name. Only the student researcher will have access to the information. No names and other facts that might identify your child or his/her teacher will appear when this study is published. Additionally, the student researcher will not have access to your child's school records.

VII. Contact Persons:

Contact Bernadette Scruggs (770-366-6304, bscruggs@student.gsu.edu) or David Myers (dmyers@gsu.edu) if you have questions about this study. If you have questions or concerns about your child's rights as a participant in this study, you may contact Susan Vogtner in the Office of Research Integrity at svogtner1@gsu.edu or 404-463-0674.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.
If you are willing to allow your child to participate in this research, please sign below.

_____	_____
Participant's name (please print)	Date
_____	_____
Parent signature	Date
_____	_____
Student Researcher	Date

Georgia State University
School of Music
Informed Consent

Title: Learning Outcomes of Two Divergent Middle School String Orchestra Classroom Environments: A Comparison of a Learner-Centered Approach and a Teacher-Centered Approach

Principal Investigator: PI: Dr. David Myers
Student PI: Bernadette Scruggs

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate the learning outcomes of two divergent middle school string orchestra classroom environments. You are invited to participate because you are a middle school string orchestra teacher. A total of four participants will be recruited for this study. Participation will require approximately fifteen minutes of your time each week over five months: August, 2007 through December, 2007.

We will be asking questions about your views in regard to the classroom environment of your eighth-grade string orchestra class. The string orchestra teachers and eighth-grade students at two middle schools will be invited to participate in this study. Your participation in this program may help to improve learning techniques of ensemble classrooms.

II. Procedures:

If you decide to participate, you will be assigned one of two roles in the study: the teacher of a teacher/conductor ensemble classroom, or the teacher who incorporates learner-centered practices in the ensemble classroom. All research will be conducted in the orchestra classroom at the participating schools. At each school, one classroom will have no treatment and will continue to operate in the manner to which the teacher is accustomed. The teacher of the other classroom at each school will be given classroom practices and techniques to incorporate that are used in learner-centered classrooms. Observations of both classes by the student PI will be conducted on a bi-weekly basis and teachers and students will complete classroom environment surveys on a monthly basis. The teachers involved in this study will keep a weekly journal about the classroom environment. The journals will take ten minutes weekly and the monthly surveys will take five minutes. Teachers will participate in unstructured interviews with the researcher after observed rehearsals. At the conclusion of the study, each orchestra class will perform an informal concert in their classroom for three qualified orchestra adjudicators. This concert should fit into a regular class period.

III. Risks:

In this study, you will not have any more risks than you would in a normal day.

IV. Benefits:

Participation in this study may benefit you personally. Observation of the two classes' divergent learning styles may offer increased insight into the most effective learning techniques for a performance based class. Overall, we hope to gain information about what learning techniques offer the greatest benefit to students of performance-based classrooms.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. Each school will be assigned a pseudonym as will each participating teacher. Only the student PI will have access to the information you provide. Recordings will be transcribed and then immediately destroyed. All observation notes, interview transcriptions, and surveys will be stored in a locked filing cabinet and on a password and firewall protected computer. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form.

VII. Contact Persons:

Contact Bernadette Scruggs (770-366-6304, bscruggs@student.gsu.edu) or David Myers (dmyers@gsu.edu) if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at svogtner1@gsu.edu or 404-463-0674.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep. If you are willing to volunteer for this research, please sign below.

_____ _____

Participant Date

_____ _____

Principal Investigator or Researcher Obtaining Consent Date

APPENDIX C

Checklist of Learner-Centered Teaching Techniques

Teacher: _____ Date: _____

Today I incorporated the following techniques (Circle the number for all that were used):

1. Students unpack and set up quickly and efficiently without teacher prompting
2. Students discuss/help to select daily rehearsal objectives
3. Students assist as administrative leaders (organization tasks, taking roll, etc.)
4. Students engage in conducting music
5. Students write individual performance critiques (formal student critique)
6. Students participate in musical critiques during class (informal student critique)
7. Students self-manage learning in a sectional group
8. Students participate in peer tutoring outside the regular orchestra class
9. Students participate in peer tutoring during the regular orchestra class
10. Students participate in small ensembles while working on large ensemble music
11. Students participate in small ensembles while working on enrichment music (duets, trios, etc.)
12. Students critique musical performance and learning while working in small ensemble
13. Other (please specify)_____

_____

APPENDIX D

Sample Teacher Journal Page

Teacher name: _____ Date: _____

The teacher journal is designed to gather your reflections on teaching practices and your observations of student behaviors. Please discuss your teaching strategies and how you feel your students responded.

(**Please print**)
This week, I felt my teaching was _____

_____

_____

_____

This week, I felt the students were _____

_____

_____

_____

This week, my class achieved _____

_____

_____

Next week, I would like to try _____

_____

_____

(Continue on back if necessary)

APPENDIX E

Classroom Observation Form

Date- _____ Starting time- _____ Ending time- _____

School- _____ Classroom-_____

Physical description of classroom:

Student behavior (descriptors):

Teacher techniques (descriptors):

Classroom observations:

Emergent themes:

Codes noted:

APPENDIX F

Semi- Structured Interview Log

Date: _____ Time: _____

Teacher: _____ School: _____

Guiding Topic: Teaching Strategies
Example question: Please tell me about the teaching strategies you chose for today's lesson and why you chose them.

Response: _____

_____

Question: _____

_____

Response: _____

_____

Guiding Topic: Student response
Example question: Please tell me how you felt the students responded to today's lesson and why you feel this way.

Response: _____

_____

Question: _____

_____

Response: _____

_____

APPENDIX G

Student Focus Group Questions

1. Tell me a little bit about how your teacher teaches this class.
2. Is that the way you've always done it?
3. Has anything changed throughout the year?
4. If you were thinking about playing your instrument on your own, without a teacher, after this year, what do you think you've learned that would help you?
5. How would you apply what you've learned in orchestra this year to playing in orchestra next year?
6. If you wanted to learn a piece of music to play on your own, how would you go about doing that?
7. How did your experience in orchestra this year contribute, if it did, to your feeling that you could learn to play a piece on your own?
8. What do you feel you could, or couldn't do, on your own?
9. How would you like a teacher to be involved in helping you learn a new piece of music?
10. What would be the balance between doing it "on your own" and having a teacher help?
11. What do you want the teacher to do and what would you feel you could do by yourself?

APPENDIX H

Student Orchestra Environment Survey

For each of the following statements, please circle the number that best represents your opinion:

	1 Strongly Disagree	2 Disagree	3 Mostly Disagree	4 Mostly Agree	5 Agree	6 Strongly Agree
1. My teacher uses a variety of teaching methods (examples: small group or individual practice; student conductors)	1	2	3	4	5	6
2. I prefer when my teacher uses different teaching techniques	1	2	3	4	5	6
3. I am allowed to make choices in orchestra class (example: choosing music, daily goals or teaching methods)	1	2	3	4	5	6
4. I prefer having choices in orchestra class	1	2	3	4	5	6
5. My teacher always leads the orchestra class	1	2	3	4	5	6
6.Students help lead the orchestra class	1	2	3	4	5	6
7. I prefer it when my teacher leads the class	1	2	3	4	5	6
8. I help select the music we play in my orchestra class	1	2	3	4	5	6
9. I enjoy the music we play in my orchestra class	1	2	3	4	5	6
10. My teacher always chooses the daily orchestra class goals	1	2	3	4	5	6
11. I prefer to have input on choosing the daily orchestra class goals	1	2	3	4	5	6
12. I am responsible for my own learning	1	2	3	4	5	6
13. I am allowed to express my opinions in my orchestra class	1	2	3	4	5	6
14. My comments about our orchestra's performance matter to my teacher	1	2	3	4	5	6
15. I am helpful to others in my orchestra class	1	2	3	4	5	6
16. I could be in charge of organizing a small orchestra group performance	1	2	3	4	5	6
17. I find my orchestra class to be interesting	1	2	3	4	5	6
18. I like the way my teacher teaches orchestra class	1	2	3	4	5	6
19. I can continue to perform on my instrument with or without my orchestra teacher	1	2	3	4	5	6

APPENDIX I

Performance Assessment Instrument

Orchestra Large Group Performance Evaluation

Time of appearance: _____ Event:: _____ Class: _____ Date: _____

Name of Organization: _____

School: _____ No. of Players: _____

City: _____ State: _____ District: _____

Selections: _____ Composer/Arr: _____

_____ _____

_____ _____

Final Rating
Use only Roman numerals I-V as determined below

Adjudicators will assign the numerical score ranging from 1 (superior) through 5 (poor) in the respective square.

Criteria	Sel. 1	Sel. 2	Sel. 3	General Comments (May be continued on back)
Tone Quality Beauty Blend Control				
Intonation Chords Melodic Line Tutti				
Technique Bowing Facility Precision Rhythm				
Balance Ensemble Sectional				
Interpretation Style Phrasing Tempo/Dynamics Articulation				
Musical Effect Artistry Fluency				
General Effect Choice of Music Discipline Instrumentation Appearance				

Add Columns: _____ + _____ + _____ = _____ Total

Final Rating
21-31 = I - Superior
32-52 = II - Excellent
53-73 = III - Good
74-94 = IV - Fair
95-105 = V - Poor

_____
Signature of Adjudicator

APPENDIX J

Miller's Learner-Centered Lesson Plan

Name_____

You will receive a grade for this assignment. You must answer all the questions to the best of your ability (more than one word for most answers) and then turn it in to receive your grade.

1. Was anyone in your group late for setting up?

2. Did anyone in your group not have music or an instrument?

3. Describe what you or people in your group learned/rehearsed in *FIREWALK*.

4. Describe what you or people in your group learned/rehearsed in *THREE DANCES*.

5. Describe what you or people in your group learned/rehearsed in *O MIO BABBINO*.

6. Are you prepared for our upcoming concert? YES or NO

7. If you had to give yourself a grade for overall performance right now, what grade (0-100) would you give yourself?

APPENDIX K

ANOVA Results
Student Orchestra Environment Survey

	Group	Time	Time x Group
1. My teacher uses a variety of teaching methods	**$F(1,153) = 59.858$ $p < .001$**	$F(2,306) = .267$ $p > .05$	$F(2,306) = .594$ $p > .05$
2. I prefer when my teacher uses different teaching techniques	**$F(1,153) = 6.162$ $p < .05$**	$F(2, 306) = 2.424$ $p > .05$	$F(2, 306) = .536$ $p > .05$
3. I am allowed to make choices in orchestra class	**$F(1,153) = 35.932$ $p < .001$**	**$F(2, 306) = 19.502$ $p < .001$**	**$F(2, 306) = 4.936$ $p < .01$**
4. I prefer having choices in orchestra class	**$F(1,153) = 7.852$ $p < .01$**	$F(2, 299) = .129$ $p > .05$	$F(2, 299) = .914$ $p > .05$
5. My teacher always leads the orchestra class	**$F(1,153) = 22.396$ $p < .001$**	**$F(2, 302) = 4.111$ $p < .05$**	$F(2, 302) = 1.049$ $p > .05$
6. Students help lead the orchestra class	**$F(1,153) = 85.792$ $p < .001$**	**$F(2, 306) = 6.731$ $p < .01$**	$F(2, 306) = .354$ $p > .05$
7. I prefer it when my teacher leads the class	**$F(1,153) = 6.414$ $p < .05$**	$F(2, 306) = .012$ $p > .05$	$F(2, 306) = .466$ $p > .05$
8. I help select the music we play in my orchestra class	**$F(1,153) = 74.434$ $p < .001$**	**$F(2, 306) = 27.376$ $p < .001$**	**$F(2, 306) = 20.206$ $p < .001$**
9. I enjoy the music we play in my orchestra class	$F(1,153) = 2.932$ $p > .05$	**$F(2, 306) = 4.902$ $p < .01$**	$F(2, 306) = 1.001$ $p > .05$
10. My teacher always chooses the daily orchestra class goals	$F(1,153) = 2.028$ $p > .05$	$F(2, 304) = 1.300$ $p > .05$	**$F(2, 304) = 3.178$ $p < .05$**
11. I prefer to have input on choosing orchestra class goals	**$F(1,153) = 10.086$ $p < .01$**	$F(2, 306) = .218$ $p > .05$	$F(2, 306) = .329$ $p > .05$
12. I am responsible for my own learning	$F(1,153) = .324$ $p > .05$	$F(2, 306) = .188$ $p > .05$	$F(2, 306) = .361$ $p > .05$
13. I am allowed to express my opinions in my orchestra class	**$F(1,153) = 18.496$ $p < .001$**	$F(2, 306) = .380$ $p > .05$	$F(2, 306) = .649$ $p > .05$
14. My comments about our orchestra's performance matter to my teacher	**$F(1,153) = 7.007$ $p < .01$**	$F(2, 306) = 2.783$ $p > .05$	$F(2, 306) = .837$ $p > .05$
15. I am helpful to others in my orchestra class	**$F(1,153) = 4.703$ $p < .05$**	$F(2, 306) = .897$ $p > .05$	$F(2, 306) = .084$ $p > .05$
16. I could be in charge of organizing a small orchestra group performance	**$F(1,153) = 20.178$ $p < .001$**	**$F(2, 306) = 3.192$ $p < .05$**	$F(2, 306) = .405$ $p > .05$
17. I find my orchestra class to be interesting	**$F(1,153) = 11.230$ $p < .01$**	$F(2, 306) = 2.222$ $p > .05$	$F(2, 306) = .538$ $p > .05$
18. I like the way my teacher teaches orchestra class	**$F(1,153) = 16.527$ $p < .001$**	$F(2, 306) = 1.423$ $p > .05$	$F(2, 306) = .609$ $p > .05$
19. I can continue to perform on my instrument with or without my orchestra teacher	**$F(1,153) = 8.373$ $p < .01$**	$F(2, 306) = .470$ $p > .05$	$F(2, 306) = 1.190$ $p > .05$